A study into the reflective capability of Hungarian primary teachers with differing levels of experience

Thesis

Helen Sherwin, BA, MEd

A Study into the Reflective Capability of Hungarian Primary Teachers with Differing Levels of Experience

Doctorate in Education (EdD)

Centre for Research in Education and Educational Technology (CREET)

Date of Submission: 1 November 2010
Date of Award: 15 July 2011

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

LIST OF CONTENTS

LIST OF TABLES AND FIGURES

LIST OF APPENDICES

ABSTRACT

This case study explored the reflective capability of Hungarian primary teachers of English to uncover how beginner teachers can be helped to reflect more effectively. The participants consisted of three groups of teachers with differing levels of experience: three "beginner" teachers, three "accomplished beginners" (experienced Hungarian, beginner English teachers), three "experienced" teachers.

Reflection was viewed as a complex, cognitive skill and was investigated within a framework that combined research traditions of reflection and cognitive skill acquisition. The cognitive and metacognitive skills teachers used to analyse their teaching both pre and post-lesson were compared. Data from semi-structured interviews, diaries and observational field notes was analysed using a combination of qualitative and quantitative analytic strategies.

Findings revealed that the experienced teachers reflected in a more critically aware and informative manner than the beginner/accomplished beginner teachers whose overall reflective capability appeared to be constrained by problems they experienced with reasoning skills such as problem solving. Also, the accomplished beginners (experienced teachers retraining to teach a new subject) reflected in ways similar to the beginner teachers and did not use the pedagogic reasoning skills developed through teaching their specialist subject of Hungarian, to help themselves reflect on their English teaching. All beginner and accomplished beginner teachers claimed their reflective capability developed during the study, something they attributed to co-planning lessons with an experienced practitioner.

The main conclusion drawn from this study was that both Hungarian beginner teachers and accomplished beginners may need very structured assistance in developing the strategic thinking skills underpinning reflection before effective reflection can occur. Co-planning was suggested as a framework within which such assistance could be provided.

CHAPTER ONE INTRODUCTION

1.1 Motivation for the study

This study took place in Hungary where I have taught English since 1988. I originally came to Hungary for one year to experience life in what was then communist Eastern Europe, but have never left. Since 1994, I have worked as a teacher educator in the Department of Foreign Languages at the Faculty of Apáczai Csere János, University of West Hungary, preparing teachers to teach English as a foreign language to 6 – 12-year-olds. My place of work is the setting for my study.

The view of learning underpinning my work and this study is social constructivism which perceives the relationship between social context, cognition and language as interdependent in learning, that individuals create their own understandings in personally significant ways (Vygotsky, 1978). I am committed to the belief that reflection, that learning by critically examining one's practice, is central to teacher learning. However I have always found it a problematic skill to foster especially with beginner teachers and problems I experience are reported elsewhere. Student teachers at my institution often reflect superficially, describe and summarise their experience rather than conduct a self-questioning examination of practice. This echoes Kennedy's (1993) findings with foreign language beginner teachers and Penso et. al.'s (2001) with Israeli beginners. My students experience difficulties evaluating accurately their own and their pupils' performance also reported by Balassa et. al. (2003) concerning Hungarian beginners. My students want solutions to their teaching problems rather than explore those problems for themselves (echoing Balassa et. al., 2003), rarely invest time understanding the teaching problem but search immediately for solutions (see Korthagen, 2001b, concerning Dutch trainees). My students often cannot perceive why

their teaching problems occur and fail to monitor or evaluate the choices they make (Abou Baker El-Dib, 2007, Egyptian trainees). My students sometimes have poor recall of classroom events, echoing Allen and Casbergue's (1997) findings with American beginner teachers.

Although I am committed to reflective practice, I have long been puzzled by how it works, a perplexity that has led to this study into teachers' reflective thinking. I have read a wealth of fascinating literature exploring the nature, substance and development of reflection all of which has deepened my insight into the topic. At the same time though, an elusiveness seems to exist around some issues central to my own concerns. Some leading researchers on reflection (e.g. Dewey, 1933) appear to assume that exploring one's own practice automatically leads to knowledge growth, or that reflective capability will develop with time and opportunity (Schön, 1983). Others argue that teachers may indeed reflect but do so ineffectively. They may not consciously examine practice but just rely on routine (Hoyle and John, 1995), or may need assistance in how to reflect and how to deconstruct and explore their own practice for effective reflection to occur (Griffiths and Tann, 1992).

I also found little research on how to operationalize reflective behaviour, that is on how to identify and illustrate what individuals actually do when reflecting. Many studies characterized reflection rather generally, describing processes such as 'Hearing one's own voice....exploring alternative ways to solve problems in a professional situation' (Hatton and Smith, 1995:45). However, I found few studies that identified the cognitive skills through which such reflective processes were accomplished and I came to agree with those who suggest a vagueness surrounds reflection. Atkins and Murphy (1993) concluded that many studies assume individuals employ certain cognitive and affective

skills when reflecting but few explicitly identify what these skills are. Others (McAlpine et. al., 1999; Ixer, 1999) observe that too few studies attempt to operationalize reflection. Hargreaves (2004) argues that some researchers such as Schön (1987) and Dewey (1933) describe what reflection is but offer little guidance on how to judge when it is occurring. Korthagen and Wubbels (1995) claim research-based evidence into the benefits of and techniques for promoting reflection is sparse, and Moon (2000) that links between reflection and learning are not completely proven.

Paradoxically, the more I read to clarify my understanding of reflection, the more confusing the concept seemed to become. I particularly wanted information on how teachers actually think when they reflect because of one characteristic particular to my own study. My study's nine Hungarian participants reflected on their English teaching in English, this being the language of their studies and their work. The participants with advanced levels of English spoke far more eloquently than those with lower levels suggesting perhaps misleadingly, that their reflective ability was also superior. I needed therefore to get beyond how participants spoke about their teaching to how they thought about it. However I could not find information in the literature that would help me accomplish this. Indeed, I encountered almost a reluctance to codify reflective thinking too specifically perhaps as Jay et. al. (2002) observe, for fear of constraining and distorting its rich, complex nature.

These then, were the perplexities that triggered this research into the reflective capability of nine Hungarian primary teachers of English. I next describe the context that has generated this study to show how the Hungarian participants made sense of their worlds. First the political and educational background is provided, followed by details of the research setting.

1.2 Political and educational context of Hungary

Hungary is a small, central European country which until 1989/90 was part of the communist East European bloc but has now become integrated structurally into a wider Europe. In 1990 Hungary left the Warsaw Pact, joined NATO in 1999 and the EU in 2004. The regime change in 1990 triggered a process of transition still underway, where the political system moved from totalitarianism to democracy, the economy from state-owned to free market and all political, legal, economic, social, educational structures radically modernized (Radó, 2001).

Since 1990, there has been a plethora of reform to modernize education which has involved changing an education system compatible with the former communist 'Command driven' (Radó, 2001:23) economic structure to one compatible with the 'Demand driven' (ibid) systems of free market economies. Under communism, all socio-political, economic and educational decisions were made centrally, then implemented as given by a selected elite. A population skilled at replicating fixed knowledge was required, for which a transmission-based educational model, rooted in a paradigm of positivism was deemed appropriate. In contrast, the current political system characterized by 'responsiveness, consumerism and client satisfaction' (Radó, 2001:18) needs people with flexible knowledge, strategic thinking skills educated through a liberalized, learner-centred system underpinned by constructivism. Currently, elements of the traditional, positivist transmission approaches and new constructivist approaches co-exist in Hungarian education, although the old still dominates as Magnuczné (2000) a Hungarian teacher educator describes:

> Hungarian students at all levels of education are still overwhelmed by facts and figures and little time is given to digesting and

> reconstructing this knowledge. We operate in a *knowledge telling* rather than a *knowledge transformation* mood.....Although there are signs of a paradigm shift.....the change is slow.
>
> (Magnuczné, 2000:55)

Despite extensive reform, mainstream education from primary to university, is still rather traditional, teacher-centred, concerned with transmitting information. The teacher's role is quite authoritarian, teaching is from the textbook, learners work mainly alone and are tested frequently through methods that emphasise memorisation and reproduction of facts (Kerber, n.d.).

1.3 Research Setting

The setting for my study, the Department of Foreign Languages, offers two types of English teaching courses. One course is a full-time, four-year, pre-service programme, equivalent to a Bachelor of Education (B.Ed.) which qualifies individuals to teach Hungarian curriculum subjects plus English as a foreign language to 6–12-year-olds. 30% of this B.Ed. consists of the English language and English methodology programme at the Department of Foreign Languages. 70% consists of the Hungarian methodology programme where student teachers learn how to teach Hungarian curriculum subjects in the various Hungarian departments.

The other course is a part-time, two-year, in-service course for qualified, practicing teachers of Hungarian subjects who wish to retrain as English teachers. The in-service programme just consists of English language and methodology.

My study involved three groups of teachers: three "beginner" teachers who were attending or had attended the pre-service course; three "accomplished beginners" who were attending or had attended the in-service course; three "experienced" teachers.

There are three contextual features peculiar to Hungary which should be addressed. These are: the traditional classroom culture, the system of mentoring and role of assessment. I next just describe these features but later (Chapter Five) explore the impact they may have on my study into reflective thinking.

1.3.1 Classroom Culture

The dominant methodology at all levels of Hungarian education is a traditional, rather authoritarian, information-transmission approach (Debreczeni, 2003). At my institution, pre-service students are exposed to two markedly different sets of educational values and teaching approaches on their Hungarian and English methodology programmes. On the Hungarian programme, input tends to be delivered through lectures with little explicit attempt to link input to the classrooms. All nine of my study's participants would have studied Hungarian pedagogy in this manner. The English programme is underpinned by a social constructivist view of learning and student teachers are exposed to and encouraged to engage with new information in ways that link to their practice. At times, both pre and in-service teachers struggle to accommodate these different approaches in their own learning and professional practice. For example, sometimes they are reluctant to participate in discussion-based activities in English classes, or take seriously activities such as keeping teaching journals, that ask them to reflect on their English teaching. They may simply be more comfortable learning through the information-transmission approaches they have experienced throughout their schooling.

These differences between the English and Hungarian methodology programmes stem from the 1989/90 regime change, when Western languages suddenly replaced Russian as the compulsory foreign language. My colleagues speedily established foreign language methodology programmes to train foreign language teachers. They were given an overall structure (e.g. hours, assessment requirements, subjects) but few restrictions on course content and delivery. My colleagues, because of their foreign language skills, were well-acquainted with international perspectives on education through foreign travel, literature, international conferences, and took the opportunity to create programmes based on constructivist principles.

1.3.2 Mentoring

At my institution, teaching practice (TP) provision is low, typical of Hungarian training institutions in general (Balassa et. al., 2003). On their four-year B.Ed., students teach between 25–40 English and Hungarian lessons, most of which occurs during an eight-week practicum at the end of their course. Prior to this, trainees teach four to six lessons in my institution's practice school, supervised by school-based mentors.

It is arguably difficult for trainees and mentors to achieve an open, equal relationship in any educational context but for Kullman (1998), the traditional mentoring relationship in Hungary seems particularly hierarchical where the judgemental presides over the developmental side. In the practice school, trainees work in TP groups of 10 – 15. Mentors dictate one lesson plan to the whole TP group for one student to teach the following week. The TP group and mentor observe this taught lesson. Then, during the group post-lesson discussion, the teaching student reflects on her teaching performance. The mentor gives mainly summative feedback and awards a mark both for the teaching

performance and the trainee's lesson reflections. All of my study's participants would have experienced this strict mentoring style at some point in their careers.

1.3.3 System of assessment

The learning culture in Hungarian education is built around a system of marking. Marks range from 1 (fail) to 5 (excellent) and throughout their schooling, pupils are assessed on a daily/weekly basis. Pupils receive marks for all work they produce, their motivation and their diligence. In teacher preparation for instance, trainees receive marks for all their lesson plans, teaching performances, post-lesson reflections, TP journals. Furthermore, marks assume particular significance in Higher Education as good marks are rewarded financially. At my university, students with good marks can receive grants 30% higher than those with lower marks. Thus it is very important for students to obtain good marks.

1.4 Research questions

Chapter One has described my motivations for undertaking this study and the context within which it is set. The questions generated by this context and that frame my study are:

1. Do differences exist in reflective capability between nine Hungarian EYL teachers (English to Young Learners) with differing levels of teaching experience? If so, what are the differences and why might they occur?

2. What implications do any findings have on Hungarian teacher education?

Although various perspectives exist on teacher learning, my questions are informed by two research traditions. Research into reflection has supported my exploration of how teachers learn through exploring their own practice. Research into cognitive skill acquisition has provided insight into how to foster reflective capability by enhancing an individual's cognitive resources. In Chapter Two, I review the literature of these research traditions to establish the theoretical framework underpinning my work.

CHAPTER TWO LITERATURE REVIEW

Chapter Two seeks to address the theory underpinning the research questions posed in Chapter One. First the professional knowledge that teachers need and how they acquire it is addressed. Then, literature on reflection and cognitive skill acquisition is reviewed. Chapter Two concludes by considering how to promote practitioners' reflective capability.

2.1 Professional knowledge of teachers

The view of learning underpinning this study is social constructivism. Constructivism with its core tenet that individuals actively construct their own knowledge in personally significant ways from information they encounter, raises several questions pertinent to my work. These include the extent to which cognition or social context influences development and given that individuals construct their own understandings, the nature and role of formal theoretical knowledge in teacher education.

2.1.1 Social versus cognitive learning perspectives

Constructivism gives rise to various interpretations which some researchers (Palincsar, 1998) place on a continuum. At one end are Piagetian perspectives where learning is perceived as elaborate problem solving and internal cognitive processes are emphasized (Piaget, 1955). At the other are Vygotskian perspectives where knowledge is perceived as bound to the socio-cultural setting in which it is situated and learning as a context-specific process based on social interaction (Vygotsky, 1978).

One key debate concerns the respective roles of interaction or cognition in development. For researchers from a social perspective, any learning theory must accommodate the notion that context, language and cognition are inseparable. In Lave and Wenger's (1991) situated learning, for instance, knowledge is perceived as specific to 'communities of practice' (groups of people with shared thinking and behaving) and is learnt through 'legitimate peripheral participation' (Lave and Wenger, 1991:34) a social process of enculturation into the community. By participating in the community's activities, one gradually acquires its knowledge and skills. This perspective assumes that since knowledge is context-specific, it does not transfer easily between settings so knowledge encountered outside the community is difficult to use in settings within the community. At my institution for example, our trainees perceive a gap between the English methodology programme's views on teaching/learning and the schools where they teach. When such tensions exist between communities, the set of beliefs that are the least relevant and meaningful are rejected (Lave and Wenger, 1991), here those of the English methodology programme.

In contrast, cognitive researchers emphasize the role of cognition in learning, arguing that learners need more explicit support on how to develop their cognitive resources than legitimate peripheral participation provides. Tripp (1996) maintains real-life settings are so complex that learners need assistance in mastering skills involved in the settings' activities, to help them cope with the unpredictability that exists. Anderson et. al. (1996) challenge the idea that knowledge cannot transfer between settings. For them, if learners are helped to notice 'the cues that signal the relevance of an available skill' (1996:7), transfer can occur. In teacher education this could involve analysing with beginner teachers, videos of experienced teachers to highlight classroom problems that

occur, when, how and why the experienced teachers responded and how this information relates to the beginners' own practice.

Hay (1996) notes that legitimate peripheral participation underestimates the powerful cognitive resources individuals bring to any learning situations. Merely assimilating community beliefs may mean accepting the status quo and ignoring one's capacity for innovation. Or, learners may initially have 'no space' (Hay, 1996:93) to generate change until they themselves are 'old timers' (ibid) by which time motivation to challenge the status quo is lost.

Eraut's (2000) characterisations of the nature of professional knowledge can accommodate these diverse views. He maintains that any conceptualization of knowledge acquisition should combine both situative and cognitive perspectives. Cognition is social, knowledge is indeed shaped by its context as for example, when I and my colleagues share teaching ideas but modify them to fit our own particular classroom conditions. However, individual modes of cognition are also important. The diverse cognitive resources my colleagues and I bring to our discussions, our differing motivations, social skills and capacity for learning all impact on how we interact with the knowledge we encounter.

2.1.2 Defining professional knowledge

Much recent literature on teacher learning addresses the nature of theoretical knowledge, what it consists of, its role in teacher education and conditions that best foster professional development. These issues trigger much debate and I begin with the question of whether it is desirable, achievable or even useful to define teacher knowledge.

One concern is the feasibility of actually articulating knowledge. Shulman's (1987) characterisations of pedagogic knowledge included knowledge of: subject, curricular/materials, learners, educational contexts, educational purposes/values, general pedagogy, pedagogic content knowledge. However, this pedagogic code has been much criticized for being misrepresentative and unrealistic. Elbaz (1993) argues the complex, implicit, context-bound nature of teachers' knowledge makes codifying it impossible. For Banks et. al. (1999), pedagogic knowledge is dynamic, emerging from interactions between learners, contexts, subject knowledge, pedagogy, not static as Shulman (1987) implies. Hoyle and John (1995) maintain that researcher bias precludes the articulation of one universal knowledge code. Positivists would seek to create one absolute knowledge of 'context free generalisations' (Hoyle and John, 1995:54) with which constructivists, who view knowledge as individually constructed, could never agree. On the other hand, Tickle (2000) and Loughran et. al. (2003) note that while codifying and systemizing knowledge can encourage new teachers to be over-simplistic about teaching and learning, it can also clarify and help teachers access and make sense of that knowledge more easily.

Hence, the fundamental question of what constitutes pedagogic knowledge generates much debate.

2.1.3 Role of formal knowledge

Another dispute concerns the role of formal knowledge in teacher learning and professional practice. Formal knowledge or 'Codified knowledge' (Eraut, 2000:114) refers to the theoretical, factual knowledge derived from academic, university-based research. One challenge diverse teacher education programmes all seek to address is the

'theory practice divide' (Hoyle and John, 1995:65) and how to encourage new teachers to actually use the theoretical knowledge they meet on their training courses.

Some researchers argue (Schön, 1983) that this divide results from flaws inherent in the professional training approach of 'technical rationality' (Schön, 1983:22) where beginners learn given theory then attempt to apply it in their practice. The main problem highlighted by some educators (Korthagen and Kessels, 1999; Ur, 1992), is that student teachers tend not to use new knowledge and skills they are exposed to on their training courses, but instead teach traditionally as they themselves were taught.

One explanation for the failings of technical rationality concerns how learners learn. Constructivist theorists (Korthagen and Kessels, 1999) emphasize that to support the learning of new knowledge, programmes should address trainees' prior beliefs about education, beliefs which greatly influence how they interpret new information. For example, students can be encouraged to compare their own educational values with those embodied in their training programmes. This though, is something technical rationality does not cater for.

A second reason for failure concerns the nature of teacher knowledge itself. In his critique of technical rationality, Schön (1983) emphasizes how technical rationality grounded in positivism, views knowledge as an absolute, fixed, context-free body to be learnt and applied. This is conceivably a useful notion in clear, static situations such as when teachers correct maths problems as right or wrong, but unhelpful in the far more common 'puzzling, troubling and uncertain' (Schön, 1983:40) settings of real-life such as when teachers strive to comprehend why pupils misunderstand something. For this, a flexible, practical knowledge is needed and in such cases professionals reject theoretical

knowledge learnt on courses and rely on their own resources. Ur's (1992) views concerning the training of foreign language teachers echo Schön's. She argues student teachers are often taught a rather high-status, abstract knowledge on training programmes but actually need a practical knowledge linked to their classrooms where real teaching problems occur. Training course knowledge is often perceived as irrelevant, inappropriate and consequently ignored. Technical rationality is the approach predominantly used in teacher education in Hungary and Ur's (1992) arguments capture the situation at my own institution where student teachers do not use in their practice the new knowledge and skills they meet. To explore this problem, it is useful to address the type of knowledge that underpins professional behaviour.

Much recent research dismisses the notion of theory-based decision making inherent in technical rationality, arguing that teacher behaviour is guided by a practical knowledge developed from teachers' practice. This knowledge is termed variously as 'Personal, practical knowledge' (Clandinin and Connelly, 1990:25), 'craft knowledge' (Brown and McIntyre, 1993:17), or 'knowing-in-action' (Schön, 1987:255). Elbaz (1981) characterizes this practical knowledge as unique to the teacher, difficult to articulate, subject-specific, defined in and by the context in which it is used and acquired from experience rather than theory. Some researchers (Schön, 1983; Elbaz, 1981; Clandinin and Connelly, 1990) minimise the role of theoretical knowledge in learning, suggesting growth is achieved through professional experience when practitioners engage in action then analyse that action. Others though attach more importance to theory. Pollard (1997) argues theory can, 'complement, contextualize and enhance the detailed and practical understandings of teachers' (1997:17) a view shared by Giffiths and Tann (1992), Tickle (2000) and Shulman (1987). These researchers focus less on the importance of theory itself, but on how individuals interact with it and Eraut's (2000)

characterisation of professional knowledge provides a convincing explanation of how individuals interact with codified knowledge in the production of learning.

Eraut divides professional knowledge into formal 'Codified knowledge' (2000:114) and the practical, 'Personal knowledge' (2000:114) that actually steers professional behaviour. This practical knowledge consists of: our interpretations of codified knowledge; any practical skills that help us operate professionally (e.g. problem solving); metaprocesses involved in self-directed learning such as reflecting on experience and planning for change. It is these metaprocesses that enable teachers to use what they know and learn from experience. For Eraut (1994), the challenge in any educational context is to enable individuals to reconstruct codified knowledge into their personal knowledge systems. Otherwise it remains, 'in educational discourse...without affecting practice' (Eraut, 1994:63). Technical rationality fails to provide any meaningful mechanism for this reconstruction process to occur which may explain why it fails as an approach to teacher education in Hungary.

Reflecting on practice is often proposed as one powerful mechanism for integrating theory into practice. By analyzing experiences to search for explanations and solutions to problems we encounter, formal theory as well as existing personal knowledge can be used to develop new insights (Eraut, 2000). We may for instance, modify a theoretical principle to our own context thereby broadening and reshaping our practical knowledge in the process. Put differently, reflection may help us learn from formal knowledge, from ourselves and our own experiences.

This section has highlighted the following points:

- An approach may be needed to teacher education that fuses both social and cognitive perspectives.

- Technical rationality with its focus on abstract theoretical knowledge may be an inappropriate approach for teacher education.

- Theoretical knowledge is important but student teachers need opportunities to reconstruct that knowledge in personally significant ways. Reflection may facilitate the reconstruction of knowledge.

2.2 Reflection

The literature characterises reflection in diverse ways with different concepts, terminology, dimensions and frameworks being suggested. I agree with Korthagen (2001a) that this diversity makes it hard to conceptualize one definition specific enough for consistent application. This is especially important in an empirical study such as my own, that explores the reflective capability of Hungarian teachers with differing levels of experience. I recognise my work has no meaningful context without a clear understanding of reflection, so next I discuss key constructs, selected for their relevance to my research questions and their potential to deepen my understanding of reflective capability.

All conceptualizations share the notion that reflection involves modifying our existing mental structures through our attempts to analyse our experiences. Thus I am attracted to Korthagen's (2001a) stance that taking a cognitive perspective can unite somewhat the diverse views. I start by exploring the cognitive dimension suggested by Dewey

(1910) and Schön (1983) and the metacognitive dimension to reflection (Clegg, 2004). Then I address the dimension of time to help me compare reflection pre and post-teaching, before turning to collaboration in reflection to understand whether reflecting with someone fosters reflective skills. Next, I consider ideas concerning levels of reflection to learn whether teaching experience influences reflective capability. Finally, I examine how context influences reflective thinking to see whether the rather authoritarian Hungarian education system impacts on reflective behaviour.

2.2.1 Cognitive dimension to reflection

Dewey's (1910) conceptualization of reflection is essentially one of an internally-oriented, problem solving activity where problem resolution stimulates future learning. Reflection refers to a type of thought, the: 'active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends' (Dewey, 1910:6). This thinking is stimulated by some perplexity which we seek to resolve by working through a cognitive 'thought cycle' (1910:77). This cycle involves repeatedly considering problems, attempting then evaluating solutions in increasing depth. Dewey (1933) added an affective dimension to this cycle through three reflective attitudes that he argues underpin change and growth, the aim of reflection. These are, 'open-mindedness' (Dewey 1933:29) and being open to new ideas; 'responsibility' (1933:30) or thinking properly about the consequences of one's actions; 'whole-heartedness' (ibid), a willingness to engage fully in the reflective cycle.

One influential researcher to build on Dewey's ideas is Schön (1983, 1987) who like Dewey, perceived reflective activity as elaborate problem solving. Unexpected incidents prompt us to surface and analyze our normally tacit reasons for doing things (our

'theories of use' Schön, 1987:255), constructed from our practical knowledge of cognition ('knowing-in-action', ibid). We are pushed to reassess, modify our actions and the reasoning behind them which results in knowledge growth. Reflective activity spirals through a three-stage cycle of 'appreciation, action and reappreciation' (Schön, 1983:132) and three notions central to this activity are repertoire, reframing and the distinction between reflection-in and on-action.

'Repertoire' explains how professionals use past experiences to inform current situations and refers to the implicit store of 'expectations, images and techniques' (Schön, 1983:60) acquired through repeated encounters with situations. In essence, we make analogies between past situations and current problematic situations, to help us make sense of them. Since our repertoire broadens over time, it becomes increasingly easy to understand unfamiliar situations which is why experience leads to increased expertise (Schön, 1983).

Framing and reframing problems occurs in the 'appreciation' and 'reappreciation' stages of Schön's (1983) cycle and refers to how we define the problematic situations we meet. Schön (1983:40) writes:

> When we set the problem, we select what we will treat as the 'things' of the situation, we set the boundaries of our attention to it and we impose upon it a coherence which allows us to say what is wrong and in what directions the situation needs to be changed. Problem setting is a process in which, interactively we name the things to which we will attend and frame the context in which we will attend to them.

Problem setting, or framing and reframing, is a cyclical process and for Schön (1983) it is this defining of problems as much as solving them that stimulates knowledge growth. Repeatedly framing problems, helps us surface and examine our tacit, practical knowledge which ultimately results in better understandings. Our initial framing during 'appreciation' may seem inadequate so we re-examine the situation from new angles leading to new understandings. In the second stage, 'action', we try out these new hypotheses which may yield further, 'unintended changes which give the situations new meaning' (Schön, 1983:131). As a result, we may reinterpret and reframe the situation ('reappreciation') and in doing so yet again examine our experiences from new perspectives. Thus, by repeatedly asking ourselves questions about initial and implicit understandings of a situation, implicit knowledge becomes explicit, and available for analysis and use in further actions.

A third key notion is Schön's (1987) distinction between two reflective time frames of 'reflection-on-action' (1987:26) occurring after the event and 'reflection-in-action' (1987:26) which involves a conscious thinking about actions and building of new understandings to inform actions in the situation that is unfolding. He maintains:

> we may reflect in the midst of action without interrupting it during which we can still make a difference to the situation in hand – our thinking serves to reshape what we are doing while we are doing it. (Schön, 1987:26)

Schön's (1983) and Dewey's (1933) characterizations of reflection as thoughtful self–questioning and problem-solving, have received much support in teacher education, something evident from the proliferation of courses based on reflective practice

(Harrison et. al., 2005). At the same time, criticisms of and modifications to Schön's original ideas have gradually emerged and one major challenge concerns his distinction between reflection-on-action and reflection-in-action.

Eraut (1994) argues that Schön (1983) failed to clarify how the time available for reflection may change the nature of reflective activity. For Eraut (1994), Schön (1983) implies that reflecting-in and on-action involve very similar information processing, that both involve working through the 'appreciation, action, reappreciation' (Schön, 1983:132) cycle, of repeatedly analyzing one's understandings of a problematic situation to find a solution. Subsequent researchers though, highlight how different time frames may trigger different modes of cognition. Eraut (1994) claims reflection-on-action, such as analysing events after a lesson, employs a conscious mode of thinking characterized by an awareness of what is learned and deliberate efforts to learn it. With reflection-in-action, little time is available between noticing the problem and identifying a solution so seemingly instantaneous, unconscious decisions are made with little conscious effort and awareness of learning (echoed by Giffiths and Tann, 1992). Tomlinson (1999a) argues that if there is a little time to pause and think while teaching, both conscious and unconscious processing can be employed.

A second criticism involves Schön's (1983) assumption that reflecting-in-action involves reframing a problem while we are working on it. Eraut (1994) argues the very act of reframing involves creating a reflective distance between ourselves and the problem concerned. Thinking then is actually closer to reflection-on than in-action. A third criticism is of Schön's (1983) suggestion that reflection-in-action and reshaping tasks while doing them is the most cognitively challenging. Some researchers agree with this view (Hatton and Smith, 1995). Others do not, arguing that the short time

available between action and reflection is too short for thoughtful, effective reflection (Eraut, 1994), that teachers simply rely on routines to respond to events involving little analysis (Korthagen and Kessels, 1999), that reflective activity is thus simply restricted to dealing with 'the task in hand' (Van Manen, 1995:34) rather than analysing the reasoning behind it.

These criticisms imply that some confusion surrounds the undoubtedly important Schönian distinction between reflection-in and on-action, which may cause uncertainty over the impact of reflection on learning. I am thus persuaded by Eraut's (1994) arguments that it may be helpful to consider Schön's theory of reflection as a theory of metacognition, of thinking about thinking. Eraut (1994) describes metaprocesses as those used to direct one's own behaviour: 'the evaluation of what one is doing and thinking, the continuing redefinition of priorities, and the critical adjustment of cognitive frameworks and assumptions' (Eraut, 1994:115). This description conceivably encompasses Schön's (1983) conceptualization of reflection as interpreting contexts, weighing up alternatives, hypothesizing about what might happen, monitoring solution attempts and modifying understandings. For Eraut (1994), if Schön's (1983) theory of reflection is considered as a theory of metacognition, this can shift the focus off the time element in reflecting-in and on-action onto metaprocessing. Consequently, any misunderstandings arising from Schön's lack of conceptual clarity can be avoided.

Metacognition

Flavell (1979) defined metacognition as: 'knowledge and cognition about cognitive phenomena' (1979:906), an understanding of and ability to monitor our own thinking that helps us understand what, why, how and when we do things. He distinguished between metacognitive knowledge and metacognitive experience. Metacognitive

knowledge refers to our understanding of our own cognitive processes, the tasks we face, and strategies useful in task completion. Metacognitive experience is how we use our metacognitive knowledge to oversee our own learning through the use of cognitive strategies and metacognitive strategies. Metacognitive strategies are not uniformly defined, but Hartman's characterization of 'planning, monitoring, evaluating and revising one's thinking processes' seems both broad and concise enough to be useful (Hartman, 2001:35).

Reflection is often considered an aspect of metacognition because both reflective and metacognitive skills involve a high level of self-awareness and control of our thinking. Clegg (2004) characterises reflecting on practice as an activity deploying both cognitive (e.g. problem solving, describing) and metacognitive processing (e.g. evaluating events, planning for changes). Simons (1996) describes a reciprocal relationship between reflection and metacognition, that reflecting on experience provides insight into the experience itself and also develops metacognitive knowledge on how to improve task performance thus fostering control of thinking. He writes: 'Reflection sets the stage for the next learning episodes and may lead to changes in metacognitive knowledge and beliefs' (Simons, 1996:439).

Other researchers link the sophistication of practitioners' metcognition and their reflective capability to their level of professionalism. McAlpine et. al. (1999) suggest that teachers develop increasingly sophisticated metacognitive thinking skills as teaching experience develops and this enables them to reflect more effectively. Tickle (2000) identifies being self-reflexive as critical for professional growth, that reflective skills achieved through metacognitive awareness enable practitioners to continue their own self development.

Considering reflection as an aspect of metacognition has influenced my work in two ways. Firstly as a researcher, given that teachers when reflecting draw on cognitive and metacognitive processing, I have analysed my participants' reflective capability by examining their cognitive and metacognitive activity. The second implication has had a more practical application. Fostering learners' metacognition is lengthy and challenging but as Hartman (2001) observes, a well-established tradition into developing metacognition exists. Research into fostering reflection though is less well-developed. There has been little systematic work into techniques for promoting reflection (Mackintosh, 1998), little guidance on how to identify that reflection is occurring (Day, 1993), links between reflection and learning are poorly researched (Moon, 2000). However, considering reflection as an aspect of metacognition has enabled me to use the literature on developing metacognition for guidance on developing reflective capability.

2.2.2 Dimension of time

The time when we reflect impacts on learning in different ways with for instance, reflection-in-action relying on intuitive modes of cognition but retrospective reflection (reflection-on-action), on more conscious modes. I now extend my discussion of this temporal dimension by focusing on 'Anticipatory reflection' (Van Manen, 1991:101) and reflection oriented to future experiences.

Anticipatory reflection

Research suggests that anticipatory reflection is triggered through the activity of planning (Van Manen, 1991; Clark and Yinger, 1987), so by examining teachers' planning practices, I aimed to gain insight into the nature of their anticipatory reflection. I also agree with those who claim that currently, anticipatory reflection is under-

researched in professional education (Marcos and Tillema, 2006) but that professional education should foster anticipatory reflection, reflection-in and on-action, for practical reasoning skills to fully develop (Greenwood, 1993). This is why anticipatory reflection is a focus of my study.

In defining anticipatory reflection, Van Manen (1991) and Loughran (1996) draw on the Deweyian/Schönian notion of reflection as elaborate problem solving. Loughran (1996) characterizes anticipatory reflection as 'framing a problem before it occurs' (Loughran, 1996:20). Van Manen (1991) defines anticipatory reflection as when we:

> deliberate about possible alternatives, decide on courses of action, plan the kinds of things we need to do and anticipate the experiences we and others may have as a result of expected events or of our planned actions. (Van Manen, 1991:101)

Thus, from a cognitive perspective, the reflective processes central to Deweyian/Schönian conceptualizations of reflection apply equally to anticipatory reflection. These include, interpreting and analyzing the prospective context, problem framing, drawing inferences from what is perceived, anticipating and hypothesizing about what might happen, weighing up possible courses of action and planning to implement change resulting from past actions.

I am convinced by Loughran's (1996) arguments that general reflective capability can be enhanced by promoting anticipatory reflection. Loughran (1996) maintains that when teachers anticipate problems before the lesson, this can develop their ability to reflect-in-action. He explains why through Schön's (1983) notion of problem setting, that

learning results from recognising and defining problems. Loughran's (1996) student teachers often failed to reflect–in-action because they simply did not recognize problems during teaching. Or if they did recognise problems, they could not respond because they did not know how, or the short time available during the unfolding event constrained what they could actually do. Loughran (1996) suggested teachers' ability to reflect-in-action hinged on their sensitivity to cues in the context, something he termed 'withitness' (1996:180). His teachers' 'withitness' was sharper when faced with problems they had already considered during planning. Having already predicted what might happen, they were prepared to recognise and respond to problems if they did occur. Teachers have:

> already reflected on the problem when sufficient time was available, the confidence to respond and reflect again in class is enhanced so that one is primed for reflection–in-action. (Loughran, 1996:180)

Loughran (1996) also claimed his teachers' 'withitness' promoted reflection-on-action. When teachers had anticipated a problem pre-lesson, but missed opportunities for reflection-in-action while teaching, their heightened awareness to clues in the context prompted them to refer to those episodes during post-lesson discussions. Loughran (1996) concluded that anticipating problems as part of anticipatory reflection, supported the practical knowledge and skills teachers needed for both reflection-in and on-action.

Reflection-in and on-action

To reiterate, Schön (1983) characterized reflection-in and on-action as analyzing experience to reshape a task during or after performance which enables practitioners to develop practical knowledge from experience rather than applying theory. I appreciate

that anticipatory reflection, reflection-in and on-action are all important, but in my study I just explore teachers' reflective behaviour before and after teaching simply because the limits of the study precluded an in-depth examination of all three types. My study compared the reflective capability of teachers of differing experience so it was important that I recognised when reflective activity was occurring. I found few attempts in the literature to operationalize reflection precisely but one study that was useful was Harrison et. al.'s (2005) work into the mentoring strategies that foster reflection. These researchers make an extremely helpful distinction between two general reflective processes used in retrospective and anticipatory reflection. Retrospective reflection is characterised as when individuals deconstruct practice and make sense of what has happened by breaking down and evaluating their experiences and the personal theories that inform those experiences. Anticipatory reflection involves constructing practice where, from one's prior analysis of experience, alternative understandings may be developed to inform future practice. They write:

> evidence from practice may be examined and explored (i.e. previous practice is deconstructed), personal theories may be found adequate or not and alternative understandings may be formulated (i.e. practice is constructed). (Harrison et. al., 2005:275)

I used this distinction between deconstructing and constructing practice to examine my participants' reflective activity. More specifically, I identified then compared the cognitive skills teachers used in deconstructing and constructing experience.

2.2.3 Collaboration in reflection

Reflection is explored in the light of current research into collaboration not only because the view of learning underpinning this research perceives interaction and language as critical in developing understandings but also because I collaborated with my study's participants on their lesson planning.

Day (1993) argues the Deweyian/Schönian conceptualization of reflection underestimates its collaborative nature. He highlights how interaction with others when reflecting is important, as it forces learners to face issues that they might otherwise ignore. He states:

> In order to move to levels of confrontation and ethical justification, reflection will need to be analytical and involve dialogue with others. Thus Schön's (1983) notion of 'reflective practice' may itself be criticised for failing to deal with the importance of the discursive, dialogical dimension of learning which can only emerge from processes of confrontation and reconstruction. (Day, 1993:85)

Certainly the comments made by several of my study's participants support Day's (1993) view that confrontation and dialogue are important in teacher learning. Cecília, an experienced teacher, described reflecting on practice thus:

> *I can do a lot of things because they come to me easily but when I am asked to explain why...it's more difficult to do. First because I am not very conscious sometimes and secondly because I don't have this vocabulary that you have been using,.....like "supportive".* (Cecília, experienced, Interview)

Cecília explains her ability to theorize about teaching by emphasizing the interplay between confrontation (*when I am asked to explain why*), with learning the professional discourse (*I don't have this vocabulary*) and her words mirror Freeman's (1996) observations on teacher learning.

Freeman (1996) like Day (1993), perceives conflict as central to growth. Beginner teachers through discussions with experienced teachers, gain access to the teaching community's ways of speaking and behaving, ways which often contradict their own, a cognitive tension beginners resolve by realigning their own conceptualizations to those encapsulated by the new community. Freeman (1996) emphasises the importance of learning the professional language in this process. Acquiring the new discourse is not just learning the jargon but absorbing the conceptions of the community expressed through its professional language. Language is the tool that enables beginner teachers to access, share and theorize about their teaching.

2.2.4 Levels of reflection

Given that my study examined how teachers with differing levels of experience reflected, I explored the avenue of research that understands reflection as operating at different levels. Various frameworks have been constructed to characterize differences in the content and manner of reflective thinking of teachers and my analysis of the literature revealed that while frameworks are by no means uniform, I could identify general features to inform me on the reflective thinking of my own participants. I first present similarities between frameworks, then significant differences, highlighting any implications for my own study.

Van Manen's (1977) framework of three 'Levels in reflectivity' (1977:226) provided a foundation for many later frameworks most of which also characterize reflection in terms of three levels of increasing sophistication (Zeichner and Liston, 1987; Ross, 1989; Collier, 1999; Jay and Johnson, 2002). However different frameworks often label these levels differently so for conceptual clarity, I have grouped similar levels from different frameworks under the headings "Simple", "Intermediate" and "Critical" levels of reflection. These terms are used in Chapter Four to refer to the reflective thinking of my study's participants.

Simple

At Van Manen's 'technical' level (1977:226) teachers focus on their own techniques, evaluating how well they apply basic teaching skills to achieve specific predetermined objectives. External influences such as the school and society in general are not perceived as relevant to the problem (echoed in McAlpine et. al.'s 'practical sphere' of reflection, 1999:110). Subsequent researchers have contributed the following. First, that teachers use just a limited range of reasons to explain their actions in a reportive or descriptive way, drawing largely on personal opinions (Hatton and Smith's 'descriptive reflection', 1995:41; Ward and McCotter's 'routine' and 'technical reflection', 2004:252). Second, teachers consider neither alternative perspectives nor the influence of context when framing the situation (Ross's 'Level One', 1989:26). Third, teachers can identify the salient features of a situation (Jay and Johnson's 'Descriptive' reflection, 2002:77) but do not generally perceive these situations as problematic (Collier's 'Reflection Category 1', 1999:174). Fourth, when teachers do perceive problems, they attribute causes to external factors such as pupils' misdemeanours rather than the teacher's own actions (Ward and McCotter's 'routine reflection', 2004:251).

Thus reflecting at a "Simple" level suggests practitioners focus on refining their teaching skills using limited information sources.

Intermediate

At Van Manen's intermediate level of 'practical' reflection (1977:226), teachers increasingly examine and use the beliefs and educational theories underpinning their actions to rationalize and learn from their experiences. Situations are perceived as problematic, also mentioned in Hatton and Smith's 'dialogic' reflection (1995:41) and Collier's 'Reflection Category 2' (1999:174). Other frameworks highlight the progressively informative nature of thought with teachers providing more details when considering a situation (Ross's 'Level Two', 1989:26). Reflection becomes more analytical, deliberative and strategic as teachers give a wider range of more exploratory reasons for their decisions, drawing on the literature. Also teachers can weigh up and synthesise alternative perspectives to a situation (Ward and McCotter's 'dialogic' reflection, 2004:252) and are more inclined to compare different ways of framing a problem which may yield new insights into the situation (Jay and Johnson's 'Comparative' reflection, 2002:78). Moreover, teachers consider more generic knowledge and teaching approaches that are applicable across contexts (McAlpine et al.'s 'strategic reflection', 1999:110). An "Intermediate" level then, characterizes reflective thinking as progressively analytical, drawing on increasingly wide ranges of information.

Critical

The third level 'critical reflection' (Van Manen, 1977:226) is as Yost et. al. (2000) state, often considered the most sophisticated type, involving the widest range of attributes, knowledge sources and skills. Teachers view events from multiple perspectives (Ross's

'Level Three', 1989:26), refer to social, political, and moral considerations in their reflections and consider the implications of what they do in these terms. Critical reflection in this sense is also used by Zeichner and Liston (1987), Hatton and Smith (1995), Collier (1994), Jay and Johnson (2002) and Ward et. al.'s 'Transformative' reflection (2004:250). Zeichner and Liston (1996) highlight how the socio-political context impacts on reflection that for instance, poor governmental funding may result in larger classes, influencing classroom practice and so how teachers reflect on that practice. Also highlighted by Zeichner and Liston (1996) is the moral dimension, that teachers at this level should refer to the ethical and political considerations that frame and influence their thinking. For Zeichner and Liston, critical reflection is the:

> critical examination of experiences, knowledge and values and understanding of the consequences of one's teaching, the ability to provide heartfelt justifications for one's beliefs and actions and a commitment to equality and respect for differences (1996:48).

Collier (1999) highlights an attitudinal aspect to critical reflection, suggesting that specific attributes come to the fore. She prioritizes 'a high degree of open-mindedness' (1999:174), since teachers who reflect critically are open to new perspectives that may contradict their preferred ways of thinking. Jay and Johnson (2002) note that teachers may act as 'agents of change' (2002:79) at the critical level because they understand how their actions can impact on both their own behaviour and on schools and society at large.

A third common feature of critical reflection is that that teachers display increased metacognitive awareness (Hatton and Smith, 1995; Yost et. al., 2000; Van Manen,

1991; McAlpine et al.'s 'epistemic reflection', 1999). Hatton and Smith (1995) claim that teachers with more sophisticated metacognitive thinking skills can reflect more effectively. McAlpine et. al. (1999) link up teaching experience, metacognitive awareness and reflective capability. They argue that teachers with deep subject knowledge plus teaching experience, can perform effectively the metaprocesses underpinning reflection such as setting goals, generating plans, making decisions about what to monitor.

I originally intended to use an established framework for my own data analysis and while the ones discussed above definitely helped me understand how reflection might work, there did not seem to be one recognised framework that I felt was appropriate to use. Diversity between the frameworks and conditions peculiar to my own study made it difficult to select just one.

Frameworks differ in the number of levels they contain and the relationship between the levels. Most frameworks identify three levels (e.g. Van Manen, 1977), some identify four levels (Ward et. al.'s, 2004, contains Routine, Technical, Dialogic, Transformative), some five (Bain et. al.'s, 1999, contains Reporting, Responding, Relating, Reasoning, Reconstructing). Some frameworks describe interlocking levels where teachers can reflect at any level at the same time (Jay et. al.'s 2002, Descriptive, Comparative and Critical Reflection) but most frameworks are developmental with progression through the levels linked to teaching experience (Hatton and Smith, 1995; Collier, 1999; Ross, 1989). Hatton and Smith (1995) argue that reflecting on technical skills at simple levels lays foundation for more sophisticated reflection of evaluating, comparing phenomena at higher levels. This developmental perspective appealed to me because my study researched teachers with differing levels of experience. This

perspective also, I believe receives credence from studies that suggest beginner teachers do initially focus on technical reflection (Penso et. al., 2001), or that reflection can be actively promoted through either careful mentoring strategies (Harrison et. al., 2005) or specially designed tasks (Korthagen and Kessels, 1999).

A second difference lies in the primary focus of various frameworks and I agree with Bain et. al.'s (1999) observations that frameworks often confuse the content of teachers' reflections such as a task's success, with how they reflect and the sophistication of cognitive processing. Van Manen (1977) emphasizes content. Jay et. al.'s (2002) Descriptive, Comparative, Critical Reflection emphasizes cognitive processing while Hatton and Smith's (1995) framework combines both. Bain et. al. (1999) constructed a framework that separates out four aspects of content (teaching skills, teacher and pupil performance and professional issues) and five levels of increasingly complex cognitive processing (from simple Reporting through to Reconstructing knowledge).

I was initially most attracted to Hatton and Smith's (1995) framework. It was clear and located in research-based evidence and I felt its developmental perspective could usefully support my analysis of teachers with differing experience. However, I found Hatton and Smith's characterisations of reflective thinking and their level descriptors too general to use. Also, when I attempted to fit my participants' reflections to Hatton and Smith's (1995) framework, I missed what subsequently emerged as important information such as how my experienced teachers (but not the inexperienced) created complex patterns of information by embellishing their statements. Ward et. al. (2004) warn that adhering too closely to predetermined frameworks as I did, can lead to telescopic vision and damage the validity of the data obtained. Also, Hatton and Smith's (1995) framework applied to reflective writing but reflective thinking can differ

depending on whether one reflects orally or in writing (Lee, 2005). Thus, I needed a framework that referred to oral modes of reflection as used predominantly in my study, to ensure validity of data.

I was particularly interested in frameworks that looked at how teachers processed information, at the cognitive skills used when deconstructing and constructing experience. My study was conducted in participants' second language of English, some of whom spoke far more proficiently than others and this initially implied their reflective ability was also superior. I needed therefore to examine how participants thought rather than how they spoke about their lessons and believed exploring the cognitive skills they used could help me achieve this. I found few frameworks though, that operationalized reflection through cognitive skills. I did consider Bain et. al's (1999) framework which does focus on cognitive processing but as it referred to written reflection, I disregarded it for reasons of validity.

Studying about different frameworks certainly deepened my understanding of reflection and guided my attempts to characterize my own participants' reflective thinking but variation between existing frameworks made it difficult to select just one to use. No single framework matched my requirements exactly, namely a framework that focused on information processing through mainly oral modes and referred to a second language environment. Therefore, I felt justified in developing my own framework inductively from my data, through a grounded theory approach (Strauss and Corbin, 1998, 2nd edn) and information on how I accomplished this is presented in Chapter Four.

2.2.5 Role of context

Another criticism of the Deweyian/Schönian cognitive perspective is how it focuses on the individual and underestimates the impact of context on reflection. It is currently recognised that the content and processes of teachers' reflections is influenced by the local 'learning milieu' (Boud et. al., 1998:195) of teachers' practical settings, materials, their knowledge, their pupils, and also teachers' socio-cultural-political context and the value system within which society operates (Zeichner and Liston, 1996).

Some researchers question the cultural transferability of reflection as a training approach. Boud et. al. (1998) claim that journal writing and encouraging learning through self-exploration, is unlikely to be successful in educational systems where such a learning principle is not valued. Magnuczné (2000) highlights how Hungarian academic traditions favour a positivist view of knowledge so knowledge gained from exploring one's practice is not really valued by the professional community. Consequently, there is little incentive for teachers to reflect on practice.

Any discussion of how our socio-cultural context affects how we think and learn and by extension our professional practice, needs to address the issue of our implicit beliefs. According to Pajares' (1992), our network of beliefs, attitudes and values is established early in life, acquired through our experiences within our cultural environment, represents the values of that environment and is difficult to change. Our beliefs play a critical role in learning as they filter and interpret any information we meet. Our belief system then, itself shaped by our environment, shapes how we think and learn and so by extension a teacher's ability to reflect on practice. For instance, teachers' beliefs will shape which problems teachers recognise, how they frame and reframe them, the decisions they make when searching for solutions. This implies then that any attempt to understand and influence professional practice should address teachers' implicit beliefs.

This section has argued that:

- A cognitive perspective of reflection helps unify the diverse interpretations that exist. Examining the cognitive skills teachers use when deconstructing and constructing experience can provide a useful analytical framework to explore reflective capability.

- The time when we reflect influences how we reflect. Therefore teachers' reflections before and after teaching should be investigated.

- Collaboration with another may foster knowledge growth so the impact of collaboration on reflective capability should be explored.

- Information on levels of reflective capability can illuminate links between my participants' levels of teaching experience and their reflections.

- Our socio-cultural context influences how we reflect. I should therefore consider whether the transmission model of Hungarian education impacts on the reflective capability of my study's participants.

2.3 Reflection as a complex, cognitive skill

I described earlier how despite a commitment to reflective practice, I have always found reflection a difficult skill to develop in beginner teachers who describe rather than analyse practice and experience difficulties with evaluating, problem solving and recalling information. I gradually realised that these problems were in essence cognitive skills-based. I also realised that recent work into cognitive skill acquisition may offer

insights into why beginners experience these problems and give guidance on the assistance I could provide. I became increasingly convinced by Tomlinson's (1999b) arguments for the contribution cognitive skill psychology can offer teacher education, that strong links exist between traditions in reflection (e.g. Schön, 1983) and cognitive skill psychology (VanLehn, 1996). Both traditions are grounded in problem solving, that learning occurs when we solve problems by working through a reflective experimental cycle, using a combination of cognitive and metacognitive resources. Both traditions suggest that qualitatively different developmental stages exist. Both traditions suggest that learning is fostered through collaboration with another. Skill psychology particularly attracted me for the insight it provided into the role of cognition in learning and how one's cognitive resources could be enhanced, an aspect I felt was slightly neglected in the literature on reflection.

I was gradually drawn towards an approach that investigated reflection by examining the cognitive skills participants used in deconstructing and constructing experience. I recognise such a cognitive perspective is not the only or perhaps the most effective way to address reflection. It precludes for example, an examination of the affective factors and attitudes highlighted by Dewey (1933), or the influence of context on reflection. However, I believe that given my aim of comparing the reflective capability of nine Hungarian teachers with differing levels of experience and English language proficiency, identifying the cognitive skills they used could help me judge when reflection was occurring. A cognitive approach then seemed an appropriate one to employ.

If skill psychology can usefully illuminate matters of reflection, a review of skill literature is required. I next characterize skilled action and explore how skilled expertise

is acquired. Then, I review the avenue of research that compares expert and novice performance in skills such as problem solving, a review which sheds light on the differences that occurred between my study's experienced and beginner participants.

2.3.1 Skilled action

When we reflect on practice we find solutions to teaching problems we encounter. We interpret, explore and respond to teaching phenomena using a range of cognitive and metacognitive skills, a process that ideally achieves knowledge growth. These characteristics of reflective capability correspond closely to current thinking on practical skilled action.

Tomlinson (1996) defines skilled action as the ability to achieve a goal by interpreting the context and deploying strategies to accomplish that purpose. It is the, 'ability to achieve particular types of purpose through actions based on effective reading of relevant contexts' (Tomlinson, 1996:15). This involves not just reacting to events, but also predicting and considering the consequences of our decisions. Skills can be open, occurring in unpredictable settings to which individuals constantly adapt. Skills can be closed where the conditions are predictable. Skills can be complex, encompassing many sub-skills which need to be learnt and coordinated to achieve skilled action, or simple with few constituents. According to Lim et. al. (2009) an open, complex, cognitive skill combines a high level of metacognitive processing (e.g. interpreting the context) with cognitive processing (e.g. reasoning). Conceivably, activities such as teaching or reflecting on practice can be considered as open, complex skills.

Skilled performance is generally portrayed as accurate, fluent and intuitive in contrast to the error-prone, fragmented, deliberate actions of the novice (Ericsson and Lehmann,

1996). To understand how beginner teachers learn to reflect on practice, it is important to address how skilled expertise is acquired.

2.3.2 Acquiring skilled expertise

Ericsson and Lehmann (1996) claim we acquire both simple and complex skills through, 'repetition and successive refinement' (1996:278). Complex skills are broken down into their sub-skills, learnt through repeated practice with feedback, before being reintegrated into the whole. Repetition is important but alone does not guarantee acquisition as the amount of cognitive engagement involved in learning is critical. Tomlinson's description of learning through a 'reflective experimental cycle' (1996:23) clearly captures the links between traditions underpinning cognitive skill psychology and traditions underpinning reflection. Tomlinson (1999b) himself observes that the skill acquisition cycle of setting goals, planning to achieve them, executing the plan, monitoring the outcome, reinvesting new insights into a new cycle, closely mirrors Schön's (1983:132) 'appreciation, action, reappreciation' reflective cycle. In both cases, it is when we reflect on and consciously analyse our actions that we provide ourselves with the informed feedback that pushes forward development.

Two particular activities associated with acquiring skilled action can offer information on how beginner teachers can be helped to reflect on practice. The first is deliberative practice and the second, stages of development.

2.3.2.1 Deliberative practice

Deliberative practice characterizes the type of practice that can foster skill development. Ericsson et. al. (1993) identify activities that comply with deliberative practice as follows. Activities are repetitive, highly relevant to the skill's real-life context,

contingent on learners' abilities and needs, effortful and incorporate the principle of informed feedback. Informed feedback is when performance is, 'carefully monitored to provide cues for ways to improve it further' (Ericsson et. al., 1993:368) so individuals know precisely what and how to develop and have opportunities to improve. One implication of informed feedback is that the guidance of a more expert practitioner seems critical for success.

Various studies highlight the importance of deliberative practice. Ericsson et. al.'s (1993) work that compared groups of violinists of similar levels of experience, found that 'best violinists' could be distinguished from 'good violinists' (1993:373) by the level of deliberative practice undertaken. More specifically, the experts had practised more throughout their lives and incorporated principles of informed feedback as their teachers had scrutinized performance to target aspects to improve. Ericsson et. al. (1993) concluded that expert levels of skill derived more from deliberative practice than innate ability.

Dunn and Shriner (1999) compared teachers with differing levels of experience. They also concluded that high levels of competence were related to levels of deliberative practice and teachers' willingness to perform teaching activities in ways that complied with deliberative practice. For instance, expert teachers regularly incorporated information gained from evaluating their pupils as feedback on their own teaching not just for checking their pupils' learning. Less expert teachers just checked learning.

I however agree with Sternberg (2001), that attributing expertise solely to deliberative practice is perhaps simplistic, that Ericsson et. al. (1993) underestimate the importance of individual characteristics such as persistence, risk-taking or that practitioners with

innate ability may simply be more motivated to engage in deliberative practice. But, I also believe that deliberative practice usefully specifies conditions for learning that can foster the cognitive resources of beginner teachers to promote their reflective capability. As such, deliberative practice is a useful notion to consider.

2.3.2.2 Stages of development

It is suggested that qualitatively different developmental stages in skill learning can be distinguished and various models characterize stages of skill acquisition. Similar to frameworks portraying levels of reflection, these models characterize development as a progression through levels of increasing sophistication. Stages of skill acquisition though, focus more exclusively on how development in individual cognition contributes to overall performance and so can helpfully enrich my conceptualisation of how reflective capability develops.

Anderson's ACT_R (1982) three-stage model emphasizes the changes in knowledge structure from declarative to procedural knowledge that impact on performance. Declarative knowledge is the factual, explicit knowledge that describes how things are and procedural, a tacit, practical knowledge or knowing how to do something. In the first 'declarative' stage (1982:370), attempts to perform a skill are slow, piecemeal and error-prone because much conscious cognitive processing is needed to recall and use the fragmented factual knowledge stored in long-term memory. In 'knowledge compilation' (ibid), performances become increasingly fluent, intuitive and error-free as items of knowledge gradually combine and become more automatic through practice with feedback. Finally in the 'procedural' (ibid) stage, performance is fluent, accurate and unconscious as knowledge is proceduralized.

Berliner's (1994) five-stage model emphasizes development in teachers' pedagogic reasoning skills. For instance, with problem solving, "Novice" (Berliner, 1994:165) teachers can apply rules they know to solve simple teaching problems but lack the flexibility and interpretive skills to solve more complex problems. "Advanced beginners" (ibid) become increasingly flexible but cannot identify underlying causes to problems and so may work inefficiently. "Competent" (ibid) teachers are more analytical and can evaluate events and the choices they make. "Proficient" (ibid) teachers are increasingly aware and refer to previous problematic situations to gain insight into current and future problems and finally "experts" (ibid) solve problems effortlessly, intuitively and proficiently.

Alexander's (2003) three-stage Model of Domain learning emphasizes how motivation, domain knowledge and strategic processing interrelate to promote development. One key feature is the distinction between surface and deep-processing strategies and whether understanding is gained by attending to surface features and how a situation appears, or to underlying principles and why the situation appears as it does and what inferences can be drawn. In early Acclimation, domain knowledge is sparse and fragmented so identifying underlying principles in new information is hard. Surface strategies are used, understanding is superficial and motivation is low. In Competence, knowledge becomes increasingly sophisticated and principled. Deep-processing strategies are used, understanding is more comprehensive and motivation increases. In Proficiency, knowledge is extensive and specialized. Practitioners may engage in research employing deep-level processing and so interest levels are high.

Clearly, there are limitations to such developmental models of learning. These three models for instance, differ in what constitutes development. Anderson (1982) focuses

on knowledge structure, Berliner (1994) on pedagogic reasoning, Alexander (2003) on the interplay between knowledge, information processing and motivation. Also as VanLehn (1996) notes, development is not linear, stages merge and interrelate into more complex patterns. A teacher may solve a problem by evaluating alternatives, reflecting on past problems but without identifying the problem's underlying cause. She would, according to Berliner (1994), be simultaneously performing skills in the "competent", "proficient" and "advanced beginner" stages.

Two particular insights from skill psychology contribute to my work. First, I believe that reflective capability can be fostered if activities are provided that comply with conditions for deliberative practice. Second, information about qualitatively different developmental stages can guide my analysis of how teachers of differing levels of experience reflect on practice. Also knowing what learners can achieve at different stages can indicate the kinds of mentoring assistance I should offer. In Tomlinson's (1999b:92) words: 'the functions of the skill learning cycle are indicators of corresponding coaching functions for the assisting of skill development.'

2.3.3 Novice and expert characteristics

Another pertinent area of skill research is that of expertise studies which compare how experts and novices think and act in various fields, to illustrate the nature of thinking and problem solving. Ericsson and Lehmann (1996) concluded from their review of expertise studies that findings are remarkably consistent across particular areas of study, knowledge or work such as teaching, medicine and sports. They found that experts share certain capabilities such as superior memory skills in their particular domain. Recent work comparing novice-expert teachers (Schempp et. al., 1998) indicates that teaching expertise develops in similar ways to expertise in other domains. It is thus

appropriate to review the expertise literature to gain insight into the thoughts and behaviour of the beginner and experienced teachers in my study.

I begin by exploring the knowledge base underpinning skilled expertise because differences between novice and expert performance are often explained in terms of the differences between what practitioners know about their domains and how they organise that knowledge (Ericsson and Lehmann, 1996). Then I focus on the skill of problem solving and summarize characteristics shared by experts and novices in various domains including teaching, to explore what successful learning may involve. From this I draw conclusions about how beginner teachers may be supported.

I acknowledge that some problematic assumptions underpin expertise research. For one thing, different criteria are used to identify expert teachers which can result in different definitions of expertise. Allen and Casbergue (1997) use years of experience, others use recommendations like teaching awards (Dunn and Shriner, 1999), Leinhardt and Greeno (1986) use student achievement levels. However, none of these criteria are completely acceptable. For Dunn and Shriner (1999), years of experience may help but not guarantee expertise, while external recommendations can be subjective (Berliner, 1986) and student achievement levels, unreliable (Leinhardt, 1992). Furthermore, expertise studies can underestimate the complexity of learning. Early studies in particular emphasized cognition and ignored the impact on learning of motivation (Alexander, 2003) or socio-cultural contexts (Hatano, 1996). Also, the terms "novice" and "experts" suggest a hierarchy with novices possessing limited knowledge whereas current thinking recognises the vast prior knowledge resources novices bring to any learning situation (Elbaz, 1993).

However despite these limitations, the expertise literature has been invaluable not only providing a framework for my data analysis but also in providing explanations for the findings generated by my study.

2.3.3.1 The nature of knowledge underpinning skilled action

In skill psychology, effective reasoning is determined by the nature of one's knowledge system. Knowledge is characterized as being organised through schemata, the abstract, conceptual knowledge structures found in long-term memory. With experience, schemata become increasingly sophisticated and interrelated as experts structure and organise the extensive knowledge they have acquired, in ways that assist proficient performance of skills such as recalling and problem solving (Glaser, 1999).

For example, Ericsson and Lehmann (1996) describe how experts' knowledge is governed by underlying principles in ways that make it easy to manage. Experts extract from new information the features most salient to them such as a concept's underlying principles, and store these features under core concepts connected to the domain. Knowledge is later retrieved for use in analysing phenomena, in terms of the domain's key concepts resulting in deeper, more principled understanding of phenomena. However, novice schemata are less elaborate and rather fragmented so knowledge is harder to retrieve and use, resulting in poorer performance.

The two main forms of knowledge traditionally identified as underpinning skilled action are declarative knowledge about phenomena and procedural knowledge of how to do something. Zeitz and Glaser (1996) highlight the procedural and practical nature of expert knowledge so experts can use flexibly and appropriately any declarative knowledge they possess. Novices though may know something is true but not how to

use it, they, 'may know a rule without knowing the conditions where that knowledge applies or how it can be used most efficiently' (Zeitz and Glaser, 1996:507).

One implication of this procedural nature of expert knowledge is that what experts know is specific not just to their field of expertise but also the context in which it is developed. As Glaser (1999:91) observes: 'The precision of experts' performance derives from the specialized knowledge that drives their reasoning'. An English teacher may solve teaching problems proficiently in her subject area of English but be less skilled at solving problems in a new subject area such as maths. She herself may lack insight into key maths concepts and so not recognise problems her pupils may experience, nor know how to solve them. Glaser's (1999) observations suggest then that subject knowledge is closely linked to pedagogic reasoning.

Schempp et. al.'s (1998) comparisons of PE teachers teaching their subject of expertise (fitness activities) and subject of non-expertise (racket sports) revealed the context-bound nature of pedagogic reasoning. Sharp differences emerged in teachers' levels of competence in expert or non-expert subjects. Lesson planning in the expertise subjects was detailed, goal-oriented and flexible but far less so in non-expertise areas. In their non-expertise areas, teachers experienced difficulties with problem solving such as predicting pupils' learning problems, were generally unsure of themselves and lacked motivation. Schempp et. al. (1998) concluded the teaching skill and pedagogic knowledge are context-specific, that when certain contextual conditions changed such as subject matter, experts failed to excel.

Berliner (1994) drew similar conclusions from a study examining how novice, advanced beginner and expert maths teachers taught a 30-minute maths lesson of new content, to

unfamiliar pupils, in an unfamiliar setting, with 30-minute preparation time. The expert teachers were the most uncomfortable, complaining that new pupils, location and subject matter with little preparation time, constrained their teaching capability. Berliner (1994:168) concluded:

> By taking these experts out of their classrooms, we had taken away the particular context in which these pedagogues had learned to excel. Thus, we conclude that we should regard expert knowledge as, for the most part, contextually bound.

My own study explored the thinking and behaviour of teachers experienced in teaching Hungarian but beginners in teaching English and I encountered many instances of how they failed to transfer teaching skills from their subject of expertise (teaching Hungarian) to subjects of non-expertise (teaching English). Therefore I am persuaded by the views outlined above that skilled performance is bound to the teacher's area of expertise, both the general domain such as teaching and specific context such as individual subjects. This implies that it is hard for teachers to transfer their teaching skills from one context to another. As Berliner (1994:168) notes:

> Transfer across contexts and domains of knowledge appears to be very difficult....Thus we can anticipate that expert pedagogues, like experts in many other fields, will excel mainly in their own domain and in particular contexts within that domain. Their expertise will not automatically transfer across domains.

Teaching for transfer is a challenge for any teacher educator and there does not seem to be one simple answer to this issue. Some researchers (Lave and Wenger, 1991) imply the situated nature of cognition precludes transfer from one context to another. Others maintain conditions can be provided to support transfer. We can help learners notice similarities between contexts (Anderson, 1996) or if learners are helped to identify common themes in problematic situations, successful transfer can occur (Gick and Holyoak, 1980). Others argue that since different settings trigger different learning experiences, teacher education needs to be situated in a variety of contexts to provide a variety of experiences (Putnam and Borko, 2000). Still others claim developing learners' metacognitive awareness helps learners manage flexibly the knowledge they possess, so the transfer of knowledge is more likely to be achieved (Nisbet and Shucksmith, 1986). Whatever the solution, the issue of transfer is critical and is one I return to later in this chapter.

Much novice-expert research focuses on problem solving. In my study differences in the reflective capability of the participants largely related to differences in their problem solving capability. Consequently, I next establish what constitutes problem solving, then summarise from the expertise literature generalizations and characteristics concerning expert-novice differences in this area.

2.3.3.2 Problem solving skill

Problem solving is the cognitive activity practitioners engage in to overcome a problem and the literature often distinguishes between well-defined and ill-defined problems. According to Mayer (1996), in well-defined problems the situation is relatively predictable, the problem's context, content and other features such as the people involved, are established and easily recognisable. In ill-defined problems, much

unpredictability exists in the problem situation, perhaps the context, content and people are unfamiliar. If an experienced teacher plans a new lesson from her textbook for her class, this constitutes a well-defined problem as most features in the situation are known. In contrast, a teacher planning to teach a new subject, with unfamiliar materials, unfamiliar pupils in a new school, faces an ill-defined problem situation, as most features are unknown.

Central to solving well-defined problems is the notion of problem space which Mayer defines as consisting of: a 'given state' (Mayer, 1996:550) or the problem's starting point such as its context, its characteristics and how they interact; the 'goal state' (ibid) or the desired outcome; the set of procedures or 'operators' (ibid) that move us from the given to goal state. There may also be 'obstacles' (Davidson and Sternberg, 1998:488) or phenomena that constrain movement through the problem space, for instance if we lack knowledge of possible solution strategies. According to Mayer (1996), skilled problem solvers first define their problem space in order to fully understand the problem, then search for a solution by calculating how to work through that space.

Mayer also highlights four key processes central to problem space theory. These are, 'representing' (Mayer, 1996:551) when we construct a mental representation of the problem to define it to ourselves, something achieved by identifying the given and goal states, operators and obstacles and how these interrelate not only with each other but also with our existing knowledge; 'planning' (ibid) or calculating how to best achieve a solution; 'executing' (ibid) or carrying out the plan; 'controlling' (ibid) and evaluating our progress towards the goal. In my study, it was how the participants addressed these four processes that was a critical source of difference in their reflective capability.

With ill-defined problems, the components of the given state, goals, operators and obstacles are not fully specified which makes the solving of such problems far more challenging (Mayer, 1996). Indeed, as Glaser (1999) notes, for effective problem solving to occur, practitioners first need to transform ill-defined into well-defined problems by establishing components of the problem space, which in turn facilitates the search for a solution.

2.3.3.3 Differences between expert and novice practitioners

I next discuss five characteristics that highlight differences in expert-novice behaviour, differences that were clearly identifiable between the experienced and beginner teachers in my own study. These five characteristics are presented separately but in practice they all interrelate. They are:

- Experts construct reliable representations
- Experts interpret situations effectively
- Experts recognise patterns of information in their domains
- Experts display heightened metacognitive awareness
- Experts articulate about events in more sophisticated ways

2.3.3.3.1 Experts construct reliable representations

Constructing a good representation seems critical for effective problem solving and experts arguably construct more reliable representations than novices to gain deeper insight into the problem itself (Davidson and Sternberg, 1998). I consider differences between experts and novices under headings of how deliberate their approaches are to problem representation (Voss et. al., 1983) and how principled their approach is (Chi et. al., 1981).

Deliberate approach

Deliberate approach refers to the effort, time and thoroughness individuals invest in representing the problem. Voss et. al. (1983) compared practitioners solving the problem of how to increase Soviet crop production. The practitioners were divided into three groups of: experts (political scientists, Soviet specialists); intermediate practitioners (political scientists, non-Soviet specialists); novices (students and chemistry professors). Very specific differences emerged particularly between the expert and novice groups. The experts progressed slowly, invested time in constructing accurate representations of the problem situation which were then used to guide their solution procedures. Representations were structured around the problem's underlying causes (e.g. that primitive technology caused low production) and all subsequent reasoning and analysis addressed these causes. Novices spent little time representing but preferred to immediately search for solutions which were rather superficial and supported by poor argumentation. Voss et. al. (1983) concluded that the expert's deliberate approach initially slowed down progress but allowed them to manage and solve the task effectively.

Studies of teaching produce similar results. When Swanson et. al. (1990) compared how expert and novice teachers responded to descriptions of classroom discipline problems, the experts spent longer than novices defining and understanding their situations which allowed for effective solution procedures to apply. Novices quickly attempted to solve the problems but did so less effectively. Feiman-Nemser and Beasley's (1999) study into planning practices, showed that novices plunged straight into planning specific tasks unlike expert teachers who first framed their problematic planning situations before addressing any details. Borko and Livingston (1989) compared expert and novice maths teachers planning, teaching and reflecting on lessons. They discovered that

experts when planning first considered a range of information that potentially impacted on the planning problem, such as pedagogy, curriculum, their pupils and materials but novices just attended to the textbook page.

Principled approach

A principled approach refers to the ability to perceive a problem's underlying structure which allows more sophisticated representations to be constructed. Experts tend to represent problems in more principled ways than novices who as a result, understand situations more superficially.

In Chi et. al.'s (1981) study, expert and novice physicists categorized physics problems according to the approach they would use to solve them. Experts did this on the basis of the problem's underlying theoretical principles such as grouping together problems that represented the notion of 'Newton's Second Law' (Chi et. al., 1981:127). They could explain how the principles were relevant to the problem and how they could be used to find solutions. They also limited the search for solutions to those compatible with the principles so overall performance was efficient. Novices though grouped problems that appeared superficially similar such as containing 'circular things' (Chi et. al., 1981:126) and lacked the insight to move beyond the surface features of the problem so could not manage the solution process as effectively.

Likewise, Berliner's (1994) comparison of teachers' problem solving skills revealed that expert teachers used a problem's principles to construct reliable representations to guide the search for solutions. Teachers had to analyse problems about special needs education such as how to support a pupil gifted in computing and maths but with hearing difficulties. The experts (special needs specialists) broke the problem down into

very specific categories of academic, emotional and training perspectives, then offered solutions that matched each perspective. Teachers who were experienced but not in special needs, and novice teachers, failed to construct such principled representations and offered more superficial solutions such as that teachers should encourage the pupil to explore his own interests.

Taken together, these studies suggest that links exist between the quality of mental representations and the quality of problem solving procedures. Experts may be more proficient problem solvers because they not only invest considerable time representing problems but also take a more principled approach.

2.3.3.3.2 Experts interpret situations effectively

Expertise studies suggest that because experts know much and have deep insight into the features of a situation, they have developed sophisticated interpreting skills to aid their understanding of phenomena. I address this topic under the headings of "Predicting" and "Salience".

Predicting

Borko and Livingston's (1989) work comparing expert and novice maths teachers revealed that when lesson planning, novices had enormous difficulties anticipating pupils' learning problems. Experts though could evaluate the most salient information and make remarkably accurate guesses about what might happen in class. The researchers argued that expert teachers' superior predicting skills resulted from their extensive experience of teaching in varied contexts which gave them insight into and an ability to infer from a setting's features.

Berliner (1994) links teachers' predicting skills to their capacity for principled thought. In one study, when expert and novice maths and science teachers had to predict learners' responses to maths problems, experts conducted very detailed task analyses to assess the level of task difficulty. Experts examined the task's underlying structures, problems in the materials plus their causes and the learning processes needed for task completion. This information was then used to assess task difficulty and predict possible problems. Put differently, experts could identify and understand the significance of a task's underlying features, extrapolate salient information which allowed them to predict phenomenon more accurately than novices who in general had less insight into a task's properties.

Salience

There is also consensus that the principled approach of experts helps them discern important from unimportant information, something novices find hard (Alexander, 2003). Borko and Livingston's (1989) study revealed how expert maths teachers in post-lesson discussions were highly selective in the episodes they chose to explore and discussed just those that influenced the achievement of lesson aims. However, novices were unfocused, covering a range of topics such as themselves, students, tasks and materials. Also, when lesson planning, novices experienced difficulties interpreting their teaching materials and sometimes could not determine the key information needed for selecting and sequencing content.

Skilled practitioners develop various strategies to help themselves recognise salient information. In Borko and Livingston's (1989) study, expert maths teachers referred to their past lesson plans to help themselves recognise the salient information in current planning situations. Leinhardt and Greeno's (1986) study into what constitutes effective

teaching, found that expert maths teachers while planning, automatically predicted events and prepared routine-based contingency plans to be used as appropriate during teaching. This pre-empted possible problems and freed them up to focus on the most salient in-class events such as answering pupils` questions. Novices though predicted less. Consequently they dealt with more in-class problems which distracted them from identifying the most salient instructional episodes during the lesson.

2.3.3.3.3 Experts recognise patterns of information in their domains

Another distinguishing feature of experts is their ability to quickly detect meaningful patterns in information (Glaser, 1999) an ability that underlies both interpretive and memory skills.

In Sabers et. al.'s (1991) study, teachers of varying levels of experience commented on different classroom scenarios playing simultaneously on three video screens. Expert teachers instantaneously drew accurate inferences from their observations and could tell for example, that pupils were familiar with the task type from how they worked. Novices offered descriptive, patchy, sometimes confused, inaccurate comments and seemed overwhelmed by the complexity of information. Berliner (1994) a co-researcher, argued later that novices perceived unconnected fragments rather than overall patterns of information because they lacked the elaborate, principled schemata of experts. Consequently, novices could not frame and interpret what they observed in meaningful ways.

Pattern recognition also seems to underlie experts' effective memory skills. To recap, experts store and retrieve information in principled ways which enables them to create and recognise more and larger patterns of information than novices, resulting in

improved recall (Glaser, 1999). Leinhardt and Greeno's (1986) study revealed that expert maths teachers store pedagogic knowledge in interrelated schemata-based patterns, organised according to lesson structures and activities. When teachers recalled information pertaining to one lesson segment, information embedded within and around that segment was also automatically retrieved. In contrast, novices store information in smaller, more numerous, fragmented patterns so cannot similarly benefit from pattern-based recall.

2.3.3.3.4 Experts display heightened metacognitive awareness

Experts use their metacognition extensively to self-regulate their problem solving which contributes to proficient performance. Experts combine their metacognitive knowledge about problems and approaches with their metacognitive skills to guide themselves through the four problem solving processes of representing, planning, executing and evaluating their progress towards their goal (Davidson and Sternberg, 1998).

When constructing a problem representation, experts use the metacognitive skill of evaluating to assess their current knowledge and identify what they need to know about the problem. Then, the metacognitive skill of monitoring is used as experts constantly modify their initial representations when relationships between new elements emerge, leading to fresh understandings. Novices though, think less about their own problem solving. Their initial representations are simpler, less time is spent in their construction, and the representations are unmonitored and so remain unrevised (Davidson and Sternberg, 1998).

With planning, experts use their metacognitive knowledge of problem solving approaches to assess the best approach for the problem, perhaps simply recognising that

ill-defined problems should be transformed into well-defined ones (Glaser, 1999) or reviewing their knowledge of problem solving heuristics (e.g. planning backwards from the goal) to select those most likely to achieve a solution (Davidson and Sternberg, 1998). Zeitz and Glaser (1996) argue that predicting while planning is also an aspect of metacognition, as teachers, when predicting, monitor situations and regulate behaviour in advance. Novices though invest less time in planning and predict less effectively which constrains their performance.

Regarding on-task monitoring, Glaser (1999) notes that when experts execute their plan, they evaluate each problem component as they progress. They assess their on-going success and modify activity accordingly, a constant reviewing and monitoring that slows down progress but does lead to more efficient performance overall. In contrast, novices monitor their progress far less and so are often unaware of their errors which results in less effective problem solving.

According to Davidson and Sternberg, (1998) metacognition develops with experience, that experts acquire the self-awareness needed for successful problem solving through engagement with activities specific to their particular domain. Novices however, lack the domain knowledge of what tasks entail and the problems that may occur, and metacognitive knowledge of problem solving approaches. Consequently, they cannot use their metacognition to benefit performance to the same extent.

2.3.3.3.5 Experts articulate about events in more sophisticated ways

Two significant features emerged from the literature, concerning powers of articulation. First, experts organise information into complex patterns to create more opportunities

for inferential reasoning, and second, experts make talk more informative through various elaboration strategies.

Patterns of information

Lesgold et. al. (1983) explored how radiologists examined X-ray films to diagnose illnesses. Findings revealed that expert radiologists not only reported more findings than novices but also established relationships between individual findings to build up chains of reasoning into complex patterns from which further, richer interpretations were derived. One such chain was that blood spots on the X-ray were caused by blood pooling itself caused by heart failure. Novices simply reported individual findings without establishing such cause-effect links (e.g. there was blood pooling and heart failure and there were blood spots). Likewise, Zeitz's (1994) comparisons of experts and novices interpreting literary texts revealed that experts created complex patterns of information allowing for deep analysis. Experts considered abstract topics (e.g. themes, images), and supported their main statements with a network of secondary statements. Novices though focused on literal features (e.g. plot, characters) with poor argumentation. Gonzalez and Carter's (1996) study into how teachers of differing experience interpreted identical classroom events, found that beginners described and summarised what they saw with little attempt at explanation whereas experienced teachers extrapolated then combined a range of features (about tasks, students, their knowledge, pedagogy, curriculum) into complex explanations resulting in increased scope for in-depth analysis.

Elaboration strategies

Peterson and Comeaux (1987) compared experienced and inexperienced teachers reflecting on lessons. Experienced teachers achieved complex articulation by supporting

their explanations with examples, justifications and simple opinions. Inexperienced teachers simply described what had occurred and articulated far more simply. In a similar vein, two studies comparing novice and expert teachers' interpretations of teaching scenarios on video (Sabers et. al., 1991) and photo slides (Carter et. al., 1988) revealed that experienced teachers consistently embellished talk through examples, opinions and judgements. Novices just reported what they saw.

Likewise, Allen and Casbergue's (1997) study into reflection revealed that expert teachers reasoned in far more articulate ways than novices, findings the researchers attributed to the experts' richer and better-organised knowledge bases. Novices, with less elaborate schemata, experienced difficulties managing their knowledge to produce strong support for their interpretations. This resulted in less sophisticated reflections.

This section highlighted the following:

- An individual's reflective capability may be promoted by enhancing their cognitive resources. Sub-skills of reflection can be fostered through activities that comply with deliberative practice. Information about qualitatively different developmental stages can guide the assistance more experienced practitioners provide learners.

- Comparisons of novices and experts solving problems highlight the difficulties novices encounter and why these occur, information that can provide explanations for the findings generated by my own study. Novices are less deliberate and principled in their approach and construct superficial problem representations. They find interpreting new information problematic because of constraints on skills in predicting and identifying salience. They recognise fewer patterns in information which constrains recall and interpreting skills. Metacognition is used less effectively

resulting in less efficient performance. Novices articulate in simple ways which limits their opportunities for inferential reasoning.

2.4 Fostering Reflection

I turn now to the challenge of fostering reflective skills and a plethora of activities are proposed to achieve this. Common ones outlined by Hatton and Smith (1995) include journal writing where reflection is fostered when student teachers explore teaching phenomena to uncover what has influenced their thinking and behaviour. Or 'critical friend' interviews (Hatton and Smith, 1995:40) where talking about teaching with peers encourages student teachers to question their actions in safe but challenging settings. Korthagan (2001b) suggests activities that help learners make explicit their implicit beliefs about education as a prerequisite to interpreting practice, for example, drawing and comparing pictures of ideal educational settings. I have decided though not to list reflective activities but instead explore one model of learning, cognitive apprenticeship (Collins et. al., 1987) that can best accommodate key points made thus far about pedagogic knowledge, learning, reflection and cognitive skill acquisition. I first justify why I believe cognitive apprenticeship to be appropriate, then describe the model itself, before suggesting how it fosters reflection.

I have argued thus far, that an approach to teaching and learning is needed that fuses social and cognitive perspectives. Concerning a social perspective, I reported that how we reflect and what we learn is affected by the context in which we learn. I also suggested that skilled action such as reflecting on practice is specific to the field of expertise and context in which it is developed. Thus any model of learning should offer activities in settings similar to ones in which the skill naturally occurs. Regarding a cognitive perspective, I suggested it is important to foster cognitive resources as our

individual cognition affects how we interact with and reflect on new knowledge. I claimed activities that comply with conditions for deliberative practice may enhance the cognitive skills that underpin reflection. I also argued that an approach is needed that has collaboration with another practitioner at its core. If learning is indeed based on social interaction and that with appropriate support we can achieve more than we can independently, and if skill is indeed developmental and informed feedback is crucial to development, this implies a more expert practitioner can usefully offer support contingent on learners' developing needs. From the range of models of learning suggested in the literature, cognitive apprenticeship seemed to best accommodate these conditions.

2.4.1 Cognitive apprenticeship

Cognitive apprenticeship (Collins et. al., 1987) guides learners from assisted to unassisted performance by making visible the social and cognitive processes that experts use to manage complex tasks, 'to bring these tacit processes into the open, where students can observe, enact, and practice them with help from the teacher' (1987:6). This is accomplished through interaction between expert and novice practitioners in the setting in which the skill is embedded. Cognitive apprenticeship works through three developmental stages, encompassing six main teaching methods.

In stage one, observation and guided practice help learners acquire the skills necessary for task completion through three teaching methods of modelling, scaffolding and coaching. These methods provide opportunities for theoretical input and opportunities for practice with informed feedback. In stage two, methods of articulation and reflection help learners process the information they have encountered. In this stage, learners collaborate on tasks, assisted by the teacher. In stage three, learners are helped to

become independent, to generalise their newly acquired knowledge to fresh contexts through 'exploration' (Collins et. al., 1987:18). Exploration involves not only fostering the skills learners need to work independently such as the metacognitive skills of planning, but also providing opportunities for autonomy.

2.4.1.1 Modelling, Scaffolding and Coaching

Modelling is where an expert practitioner performs a task for learners to observe and start to understand how tasks are accomplished. Bandura's (1996) theory of modelling suggests that for such observational learning to operate successfully, learning environments should be provided that foster four key processes. The first 'Attentional processes' (Bandura, 1996:103) simply means that learners need access to models, to see how others behave when performing tasks. Second 'Representational and memory' processes (ibid), means learners need a chance to successfully remember what they have observed. 'Behavioural production' (ibid) suggests learners reproduce what they have remembered, invariably in a slightly modified rather than replicated form. 'Motivational processes' (ibid) states that learners should be motivated to do for themselves what they have observed. Tomlinson (1999a) adds the concept of active participation in observational learning, that if learners are somehow active while observing the model, they notice links between what they observe and their own contexts which facilitates the transfer of new knowledge to their own settings.

Scaffolding refers to how expert practitioners support novices through tasks they could not achieve unassisted. Experts structure and organise activity for novices perhaps by highlighting salient aspects of a task or maintaining interest and effort in task completion. Optimal scaffolding combines verbal instructions with demonstration and provides support contingent on learners' needs (Wood et. al., 1976). Coaching refers to

how experienced practitioners provide feedback on learners' task performance through, 'hints, scaffolding, feedback, modelling, reminders and new tasks' (Collins et. al., 1987:18). Thus both scaffolding and modelling are components of coaching.

2.4.1.2 Articulation

Collins et. al. (1987) characterise articulation as an analytical process through which individuals make explicit the tacit skills and knowledge that underpin practice. It includes any method that pushes practitioners to articulate their reasoning ready for examination and modification. It can include asking "Why?" questions, or asking learners to think aloud while completing tasks, or asking them to evaluate their peers' problem solving skills to highlight what constitutes effective performance.

It is well-documented that articulation enhances learning as it helps individuals access and clarify thinking but different researchers emphasize different aspects of articulation. Ericsson and Simon (1980) stress that the type of articulation involved is critical. They reviewed studies where participants thought aloud while performing problem solving tasks and concluded that articulating while doing can affect cognitive change to benefit concurrent and subsequent task performance. But the type of talk is crucial. Talk which uses information from long-term memory (e.g. analysing, reasoning, inferring) requires a certain degree of cognitive processing that invokes cognitive change. Less demanding talk using information instantly available from working memory (describing one's actions, a picture) involves minimal cognitive processing so is unlikely to affect cognitive change.

Berry and Broadbent (1984) emphasise that the time when we articulate during tasks is critical. They asked individuals to solve tasks (e.g. maintaining the level of sugar

production in a sugar factory) and discovered that when practitioners received input on the task prior to doing it and were then asked to articulate their reasoning during task completion, both concurrent and subsequent task performance improved. Input concerned background information to the task, predictions on what might happen and suggestions on how to respond. No improvement was evident if participants received just input (without having to articulate), or just articulated (without input), or received input on the task after task completion. It was concluded that input plus on task articulation was the optimal combination because when participants articulated while doing, they could notice and assimilate the new input more easily, as they had access to it at a time when it could be most effectively linked to action. Also, the input focused participants' attention on the task's underlying features rather than surface features which helped them construct reliable representations of the task. The requests for articulation kept their attention on those critical features all of which aided concurrent performance. The researchers write:

> ....verbal instruction directed attention towards certain critical features of the task. The subsequent verbalization requirement kept attention on these salient features, and irrelevant aspects were ignored. (Berry and Broadbent, 1984:229)

Importantly, as participants perceived the tasks' underlying principles, they could perceive how the features of one situation related to another, so information could be transferred to new contexts more easily. Hence subsequent as well as concurrent performance improved.

Berardi-Coletta et. al. (1995) emphasise how requests for articulation foster metacognitive processing. They compared individuals who articulated while doing a

task with those who did not and found that participants who articulated on task performed both current and subsequent tasks more effectively. They better understood the task, perceived its relevant features and underlying structure more effectively, worked in more complex, flexible ways and were generally more metacognitively aware. The researchers concluded that when participants were asked to give reasons or opinions, this not only focused their attention on critical task features but also triggered metacognitive processing. "Why did you...?" questions shifted participants' attention away from the problem onto how they themselves solved it, an examination of their own reasoning and actions which in effect pushed them to regulate and modify their own thought processes. Thus, requests for articulation pushed participants to be more self-aware which helped them be more reflective in subsequent tasks.

2.4.1.3 Exploration

Exploration enables learners to become independent through developing skills for autonomy. One way of achieving this is by fostering learners' metacognition. From the wealth of research on developing metacognition, I have selected from Nisbet and Shucksmith's (1984) work, just three teaching techniques pertinent to my own study. These techniques are modelling (discussed earlier), direct teaching and discussion. All three make visible to learners, the metacognitive skills involved in task completion. All three develop learners' capacity to use flexibly what they know in a variety of contexts. By thus developing metacognitive awareness, learners can solve increasingly complex problems independently.

Direct teaching

Direct teaching refers to teachers deciding upon and explicitly teaching individual strategies for learners to learn. In King's (1991) study, three groups of pupils were

asked to solve problems in pairs. Group one received a list of eleven questions to answer, that guided their metacognitive thinking, questions such as, 'What do we know about the problem?' (King, 1991:309). Group two could ask each other any questions they wanted while problem solving, but received no other support. Group three received no instructions or training on what to do. Group one solved the given problems and also subsequent problems far more successfully than the other two groups even when guiding questions were no longer provided in subsequent tasks. King (1991) concluded that guiding questions trained learners to ask themselves the strategic questions they would fail to ask spontaneously, to notice their own metacognitive strategies which in turn promoted their metacognitive processing. Simply asking and answering random questions as Group two did, could not achieve the same result.

Nickerson (2004) maintains that explicitly teaching problem solving heuristics can develop practitioners' metacognitive knowledge of problem solving strategies. This in turn helps them view phenomena with deeper insight. Direct teaching techniques (listed in Nickerson, 2004) include, asking individuals to paraphrase a problematic situation to themselves, working backwards from the goal, representing problems visually in grids. These heuristics help learners identify a situation's key features which facilitates the construction of reliable problem representations. Learning how to recognise key features also facilitates knowledge transfer as learners recognise similarities between problems more easily and use what they know to address new problems more readily.

Discussion

Teachers can review tasks with pupils to help them notice metacognitive strategies used during task completion. Nisbet and Shucksmith (1984) illustrate how a teacher and pupils identified and evaluated the success of the thinking strategies employed in

computer strategy games. They also identified which strategies could usefully be applied in other learning situations and also sought alternative approaches. By raising pupils' self awareness through discussion of their own learning, learners were being taught in ways that encouraged transfer of knowledge between learning contexts.

2.5 Selection of key texts

Table 2.1 closes Chapter Two by listing the key texts that can help guide readers through the main themes covered in this literature review.

Table 2.1 Selection of key texts

Professional knowledge of teachers	
Situated learning perspectives	Lave and Wenger (1991)
Role of cognition in learning	Anderson (1996)
Nature and development of professional knowledge	Eraut (1994, 2000)
Characterisation of pedagogic knowledge	Shulman (1987)
How beginner teachers think and learn: Initial teacher preparation	Tickle (2000)
Critique of technical rationality as a training approach for EFL teachers	Ur (1992)
Reflection	
Cognitive/metacognitive dimension to learning through reflection	Clegg (2004); Dewey (1910); Schön (1983)
Anticipatory reflection	Loughran (1996) Van Manen (1991)
Collaboration in reflection	Day (1993)
Levels of reflection	Hatton and Smith (1995)

	Van Manen (1977)
Influence of context on reflection	Boud (1998) Zeichner and Liston (1996)
Reflection as complex cognitive skill	
Contributions of skill psychology to teacher education	Tomlinson (1996, 1999b)
Deliberative practice in teacher learning	Dunn and Shriner (1999)
Stages of skill acquisition in teaching	Alexander (2003)
Nature of knowledge underpinning skilled action	Glaser (1999)
The problem solving skill	Mayer (1996)
Studies into teacher expertise	Alexander (2003); Allen and Casbergue (1997); Berliner (1994); Borko and Livingstone (1989); Schempp et. al. (1998)
Fostering Reflection	
Cognitive apprenticeship: situated cognition theory of learning	Collins et. al. (1987)
Observational learning	Bandura (1996)
Role of articulation in learning	Berry and Broadbent (1984) Ericsson and Simon (1980)
Fostering metacognition	Berardi-Coletta et. al. (1995) Nickerson (2004) Nisbet and Shucksmith (1984)

2.6 Conclusion

Chapter Two contextualised the research questions posed in Chapter One. I first discussed the nature of professional knowledge and suggested that any teacher education programme should develop participants' reflective capability to help them process and use the information they meet, in ways that fuse cognitive and social perspectives to knowledge acquisition. I then considered various aspects of reflection pertinent to my own study. A cognitive perspective was discussed to unify the diverse interpretations that exist. Notions of time and collaboration were addressed for their influence on our reflections. I also explored levels of reflection to gain insight into the impact of experience on reflective thinking. Finally, I considered how the socio-cultural context can influence reflective thinking to understand how the setting of Hungary may influence my findings.

I argued that one important but neglected area in the literature is how an individual's cognition can be fostered to improve reflective capability. I suggested if reflection is considered as a complex, cognitive skill, then skill psychology can offer guidance on how to foster cognitive and metacognitive resources. Comparisons of novice-expert performance and information on the different developmental stages, highlighted problems that novices may experience with skill acquisition and why these occur. The notion of deliberative practice was discussed to highlight how cognitive resources can be enhanced. Finally, cognitive apprenticeship was proposed as a model of learning that can foster reflective skills in a way that encompasses points discussed in Chapter Two about knowledge, learning, reflection and skill acquisition.

CHAPTER THREE RESEARCH METHODOLOGY

Chapter Three starts by addressing the background to this study including its underlying research philosophy and the links between my pilot and main study. Then I discuss the type of case study employed, the participants and issues concerning bias, generalization and ethics. I close Chapter Three by considering data collection procedures.

3.1 Background to the study

3.1.1 The philosophical paradigm underpinning the study

How I conducted my study was shaped by one specific philosophical paradigm. According to Johnson and Duberley (2000), our philosophical commitments influence all aspects of our research, commitments which should be articulated so fellow researchers can fully understand and judge the quality of our work. I next explore some general issues concerning paradigms before discussing the philosophical assumptions underpinning my own theoretical research position.

Denzin and Lincoln (2005) characterize a paradigm as a framework of ideas, of principles that shape how we see the world and guide our actions within it. It is a network of philosophical assumptions about ontology, epistemology, methodology and axiology. Ontology refers to our beliefs about what we understand by reality; epistemology to our beliefs about the nature and acquisition of knowledge; methodology to the means we use to acquire knowledge about a topic and axiology to our ethical principles.

Different philosophical assumptions are traditionally associated with particular research paradigms. Johnson and Duberley (2000) for instance, describe how differing interpretations of the positivist paradigm share paradigmatic commitments. Concerning ontology, positivists believe an objective reality exists independent of what we do, a reality that can be observed, measured and defined by researchers. Regarding epistemology, knowledge is perceived as objective, absolute, independent of its context and is value-free. It is derived from researchers' observations of and descriptions of particular phenomena. Methodology tends to be quantitative and considers data from a numerical perspective for example, by tallying then analysing the frequency of events in phenomena. Therefore, the epistemological assumption that an absolute knowledge can be defined, is contingent on the ontological assumption that an objective reality can be captured, which calls for a methodology that can measure that reality.

Researchers may hold different philosophical research positions. This is highlighted in Gage's (1989:4) reference to the 'Paradigm Wars' and the long-standing debate over the theoretical merits of different paradigms. Gage (1989) describes the challenges to the philosophical underpinnings of positivism that for instance, investigating complex human behaviour through quantitative methods is inappropriate, that teacher thinking cannot be explored independent of its context. Popkewitz (2000) argues that researchers' epistemologies necessarily reflect their socio-political-economical contexts, the 'underlying social visions and definitions of power contained in research' (2000:24). Therefore, knowledge derived from research is never objective and value-free as positivists believe but value-laden and ideological.

Denzin and Lincoln (2005) report one main challenge to positivism as interpretivism/constructivism where knowledge and reality are perceived as matters of

perspective rather than absolute, objective notions. Interpretivism aims to help researchers explore phenomena and reasons for why events occur. Findings are derived through qualitative methods, from analysing and interpreting unstructured data such as interviews, rather than using statistical procedures.

One notion emerging from the paradigm wars, the 'Incompatibility Thesis' (Tunmer et. al., 2003:92), suggested that different paradigms were mutually exclusive. This implied that qualitative and quantitative methods could not be integrated in research as their philosophical assumptions were viewed as incompatible. This notion is now largely rejected by researchers. Swann and Pratt (2003) argue that while researching within single paradigms is indeed clear and logical, it fails to capture the eclectic approach that most researchers actually adopt. Tunmer et. al. (2003) suggest that combining qualitative and quantitative methods which represents an overlapping of paradigms, may actually enhance the rigour of research. The effectiveness of a given method varies according to the context or purpose for which it is used. Adopting a mixed method approach and integrating qualitative and quantitative methods, can compensate for any shortcomings each may possess at a given time.

My own philosophical position adheres most comfortably to the interpretive/constructivist paradigm. I conducted a case study using qualitative data collection methods and a mixed method approach to data analysis when I combined qualitative with quantitative analytic strategies. To justify my theoretical research position I draw on Denzin and Lincoln's (2005:24) definition of the interpretive/constructivist paradigm as one that 'assumes a relativist ontology (there are multiple realities), a subjectivist epistemology (knower and respondent co-create

understandings), and a naturalist (in the natural world) set of methodological procedures'.

A relativist ontology assumes that reality is not an objective, fixed phenomenon to be captured, but is socially-constructed resulting from the 'intimate relationship between the researchers and what is studied and the situational constraints that shape enquiry' (Denzin and Lincoln, 2005:10). Diverse factors bring about different views on reality as what we perceive as reality may differ according to our individual life experiences. A subjectivist epistemology assumes that what we come to know is a matter of perspective on the world as new information is interpreted through frameworks of our existing knowledge, experience and values. We construct our own knowledge in personally significant ways which is therefore value-laden and subjective. Thus the knowledge we use to interpret reality represents just one possible interpretation of that reality.

In my study, I asked teachers to reflect on lessons they taught and I observed. In our post-lesson conversations, we often differed in what we interpreted as the reality that had occurred and the knowledge we used to explain that reality. For example, when one teacher saw noisy, disruptive pupils and understood their language mistakes as signs of laziness and failure, I saw pupils learning cooperatively and interpreted their mistakes as positive, natural signs of language learning. In other words, we had our own views on the reality and also on how we interpreted it.

Regarding methodological procedures, I adopted a predominantly qualitative approach as characterized by Denzin and Lincoln (2005). First, they state qualitative research views knowledge and reality as matters of interpretation, a view to which my own epistemological and ontological beliefs adhere. Second, given that our understandings

are shaped by our socio-cultural contexts, qualitative research is essentially a situated activity. My own research was situated in the settings of teachers' classrooms to gain insight into how contextual variables shaped their thinking. Third, qualitative data collection methods seek to capture real 'routine and problematic moments and meanings in individuals' lives' (Denzin and Lincoln 2005:3). My use of semi-structured interviews, observations and diaries encouraged participants to express themselves freely thus allowing such 'moments and meanings' to emerge. Fourth, given the belief that no fixed reality exists, qualitative research is multi-method and explores phenomena from multiple standpoints for maximum insight. I combined the use of interviews with diaries and observations to explore teacher thinking.

However my methodology was not exclusively qualitative as I used quantitative analytic strategies in data analysis. I adopted a mixed methods approach not only because I agree with Tunmer et. al. (2003) that mixing methods can enhance the quality of research but also because of the practicalities of my study which was conducted in participants' second language of English. I aimed to compare the reflective capability of nine Hungarian teachers with differing levels of experience. I initially only used qualitative procedures and while differences in the teachers' reflections seemed to exist, I struggled to obtain a clear enough picture that would enable a comparison to occur. I was especially confused by participants' different language levels of English. Teachers with advanced levels of English spoke more eloquently than less proficient speakers suggesting perhaps misleadingly that they also reflected more effectively. To help me judge the accuracy of this impression, I heeded Seale's (1999) recommendations that working with data both quantitatively and qualitatively can reveal variables that facilitate a comparison between a study's features. So I used a quantitative strategy to complement my qualitative strategy in data analysis.

3.1.2 Links between my pilot and main study

My pilot case study examined the post-lesson reflections of one experienced and one beginner teacher. Data from interviews, observations and diaries were analysed using grounded theory coding procedures (Strauss and Corbin, 1998, 2nd edn). Differences that emerged in the teachers' reflective capability stimulated my exploration through my main study.

The main difference between my pilot and main study was that my pilot's research design emerged rather haphazardly in response to the research events but my main study has been conducted from a theoretical perspective and my work shaped by my reading of published literature. I realised how important but under-researched anticipatory reflection is, so built an examination of anticipatory reflection into my main study. I was influenced too, by Allen and Casbergue's (1997) work which compared the reflections of twelve primary teachers with differing levels of experience. I only referred to their study on completion of my pilot but discovered many similarities. Like Allen and Casbergue's (1997) findings, my experienced teacher's recall was far more thorough than my beginner teacher's and like them, I used skill acquisition theory to explain the differences. The realisation that my pilot's conceptual framework generated similar findings to a different study's, gave me confidence to continue with my work.

My main study extended my pilot's methodology in three ways. My sample was widened to include nine teachers of three levels of experience to deepen my understanding of reflection. My data sources widened to include co-planning interviews and diaries to allow me to study anticipatory reflection. Thirdly, I employed a mixed methods approach to data analysis as described above.

3.2 Research Design

3.2.1 Case study

Case study was selected as my methodology for two reasons. First, case study is appropriate when the research context affects the phenomenon under investigation (Yin, 2003, 3rd edn; Bassey, 1999). Given that contextual realities impact on teachers' reflective behaviour, case study seemed appropriate. Second, Stake describes case study as a unique 'bounded system' (Stake, 2005:445) in that clear boundaries mark a particular set of circumstances under investigation. Inside the boundaries lie 'working parts and purposes' (ibid), which in my study were activities performed by participants pertinent to my research questions: teaching, studying and participating in the research. The external contextual features outside the boundaries included the socio-cultural, political, educational setting of Hungary.

In any case study, two aspects must be defined to achieve conceptual clarity and the first is the type of study employed. My research questions embody a desire to explore and explain the phenomenon of reflection and while at the outset, I anticipated that my work could develop theoretical insights potentially useful to others, my study is predominantly what Yin (2003, 3rd edn) terms an 'exploratory' study. The second aspect concerns the units of analysis, or the case itself which according to Stake (2005) is a central concept in case study method. Thus defining my sample is a priority.

3.2.2 Sample

My case study contained nine separate but related units of analysis, an 'embedded case study' (Yin, 2003:43) that could offer deeper insight into reflective thinking than my pilot of just two units. My units of analysis were nine Hungarian primary teachers,

divided into three groups, each containing three teachers: beginner teachers, accomplished beginners, experienced teachers.

Group A: Beginner teachers

Two Group A participants were final-year student teachers on the four-year B.Ed. course at my university. The third was a newly qualified teacher. The language level of these teachers was intermediate, at level B2-/B2 according to the Common European Framework of Reference (CEFR) (Appendix 1 contains level descriptors). Group A teachers are referred to with pseudonyms of Amélia, Anikó, Atilla.

Group B: Accomplished Beginner teachers

The term "Accomplished beginners", adapted from Bransford et. al's, 'accomplished novices' (1999:36), characterises teachers who are skilled and accomplished in one area of expertise but beginner in another. Group B teachers were experienced, qualified teachers of Hungarian subjects but beginner teachers of English. Two were attending my university's in-service English methodology course to qualify as English teachers. The third completed this course in 2000 but had just started teaching English. Group B's language level was intermediate, at level B2-/B2. Their pseudonyms are: Bettina, Boglárka, Bella.

Group C: Experienced teachers

This group contained three qualified, experienced teachers of English and Hungarian subjects. Group C's language level was advanced, at C1/C2 according to the CEFR guidelines. Their pseudonyms are: Csilla, Csenge, Cecília.

I included nine units of analysis because arguably, fewer than four cannot yield enough information to be helpful but too many cases can dilute the findings (Stake, 2005). Loughran's (1996) study into teacher reflection included four cases and Allen and Casberg's (1997) included twelve. Nine then seemed an appropriate number.

Stake (2005) emphasizes how units of analysis should represent key aspects of the phenomenon under investigation but should also offer variety to provide more 'opportunity to learn' (2005:451). By exploring how nine Hungarian primary teachers of differing levels of experience and language proficiency reflect on practice, I have attempted to combine such relevance and diversity. Table 3.1 summarises the similarities and differences between the groups.

Table 3.1 Summary of similarities and differences

Group	English teaching experience	Hungarian teaching experience	Level of English
A	Beginner	Beginner	Intermediate
B	Beginner	Experienced	Intermediate
C	Experienced	Experienced	Advanced

I invited teachers to participate through an open letter sent to various individuals and schools which detailed the research background and the study's practicalities and procedures. I specified for instance, my research purpose, the respective roles of participants and myself, what would happen to any data obtained. More people volunteered than I needed so selection was made according to whether the respondent could be considered a "Beginner", "Accomplished Beginner", "Experienced" practitioner and how accessible their schools were for data collection purposes. In total,

I visited seven schools. Table 3.2 summarises information about the participants at the time of the study.

Table 3.2 Summary of information about participants

Group A: Beginners				
Participant	**Background**	**Teaching experience**		**Relationship to researcher**
		English	**Hungarian**	
Amélia (22 years)	Final-year B.Ed. student	3 hours	3 hours	Tutor/student
Anikó (22)	As above	5 hours	3 hours	Tutor/student
Atilla (24)	Recent B.Ed. graduate	15-20 hours	15-20 hours	Ex-Tutor/ student
Group B: Accomplished Beginners				
Bettina (38 years)	Hungarian teacher. Attending in-service course.	15-20 hours	12 years	Tutor/student
Boglárka (41)	As above	15-20 hours	18 years	Tutor/student
Bella (46)	Hung/Eng teacher. Graduate of in-service course	10-15 hours	23 years	None
Group C: Experienced				
Csilla (49)	Hung/Eng teacher	17 years	15 years	School mentor
Csenge (44)	As above	17 years	14 years	As above
Cecília (56)	As above	33 years	15 years	None

3.2.3 Bias in interpretive research

As an insider researcher I have benefitted from the insider's knowledge of the research context which means it, 'will be understood and appreciated in a way not open to an outsider researcher' (Le Gallais, 2003:2). My shared understanding with the participants of Hungarian education definitely helped me to interpret my study's findings. Prior to my research I already knew many of the people and schools involved and I believe these ready-made relationships facilitated the management of my study. People were extremely co-operative and interested in my work.

As the study progressed however, I also saw myself as an outsider researcher and sensed a cultural distance between myself and the participants, especially when we interpreted the same research events in different ways. I, for instance perceived pair work as positive, but many participants as disruptive. My interpretations were framed by educational beliefs underpinning British education, and often differed from my Hungarian counterparts' beliefs and in this sense I was the outsider.

My involvement as a mainly insider researcher raises concerns about the well-documented problem in case study research of objectivity (Yin, 2003, 3rd edn). Le Gallais (2003) warns how our own implicit values will influence the research process, we may see what we expect to see and miss new phenomena. I however agree with Flyvbjerg (1999) that familiarity with context can enhance objectivity as our insight heightens our awareness of events. We scrutinize how context, theory and findings interact and so are more likely to challenge our own preconceptions than the outsider who lacks such in-depth knowledge. Certainly, to understand why participants and I interpreted things differently, I looked to the Hungarian socio-cultural context for insight into their frames of reference. Gradually, I developed a deeper understanding of

Hungarian education and society which I believe has resulted in a more balanced research stance.

One particular area open to bias was my own interpretation of the data. As a mainly insider researcher working within an interpretive paradigm, I depended heavily on my own understandings of the world to interpret my findings and I acknowledge my interpretations may not have always accurately reflected what actually happened. A second area of bias concerned data collection, certain aspects of which could have affected how participants expressed themselves and so the accuracy of the data obtained. Two particular issues warrant discussion: the impact of power relationships in interviews; the second language context of my study.

3.2.3.1 Power relationships

At the time of my study I was not teaching any participant but had previously taught and assessed several of them. Therefore I had once held power over them. For Nunan (1995:150), such an unequal relationship in interviews 'will affect the content of the interview as well as the language which is used' which may influence the information participants provide. Participants may for instance, withhold information in case it is used against them (Hockey, 1993).

To address issues of power, I strove to establish trust with the participants because if trust is established, respondents are more likely to provide honest and therefore accurate data (Rubin and Rubin, 1995). Trust is achieved if researchers are open about what participating in the research entails. For instance, according to Hockey (1993) participants feel less threatened if they know that they themselves are not being

assessed. Therefore I rigorously informed participants that I aimed for professional self-development, my role was that of a researcher and not an assessor or teacher trainer.

I communicated this message in two ways. In the invitation letter sent to potential participants, I clearly stated my goal of self-improvement. In addition, I met all potential volunteers individually to discuss aspects of the study and stressed that the information gathered in their schools at times and with classes they chose, was not to evaluate them but to help me.

Power relationships do indeed influence interview data. Despite this, my participants conveyed the impression that they trusted me and the research I was doing. I believe this is because participants also perceived me as a partial outsider. While I am part of the rigid Hungarian educational hierarchy, in practice as a foreigner, I cannot really move up the hierarchy. Therefore, I wield less power and am perhaps less threatening to other hierarchy members such as my study's participants. My status is different from a Hungarian researcher's and I believe this encouraged some participants to speak more freely than they might have done to a full insider. I sometimes had to remind teachers that our conversations were confidential but were being recorded. I suspected that speaking to an outsider in a foreign language gave some teachers a false sense of security and they divulged information that they might later regret. Indeed, on several occasions I switched the recorder off, as when one teacher freely and harshly criticized my colleagues and my institution.

3.2.3.2 Second language context

The study was conducted in participants' second language of English for three reasons. First, English was the language of the professional community within which we were

operating. Participants studied EYL methodology (English to Young Learners) in English, mentor-mentee conversations for English TP occurred in English, teachers planned lessons from UK-published resource books and taught in English. Second, I hoped to support participants' teacher learning by encouraging them to use EYL discourse and reflect in English. Freeman (1996) maintains the ways of thinking and behaving of a professional community are expressed through its discourse. The professional language is the tool beginner teachers use to identify with their community, to theorize about key concepts, to share experiences with others and so learn from teaching experiences. Third, the participants themselves wished to conduct the research in English. Hungary is a low income country and financial difficulties prevent teachers from travelling to English-speaking countries. These participants welcomed the chance to interact freely in English with a mother tongue English speaker and so gain extra language practice. Given these three reasons, English seemed the natural choice of language to use.

The second language context though did create certain problems. One problem concerned the differing English language levels of the participants. The experienced teachers were more proficient English speakers and more articulate than the beginner/accomplished beginners suggesting perhaps misleadingly that the experienced teachers also reflected more effectively. Another problem concerned the limited language skills of some participants. Sometimes participants and I misunderstood each other, sometimes they lacked the professional terminology that could have facilitated their reflections. Also the linguistic demands of speaking in English was tiring for some, which perhaps impeded their ability to reflect-on-action. In other words, the second language context potentially misrepresented the reflective capability of some participants.

To address these threats to validity of data because of bias in data collection and analysis procedures, I implemented various triangulation techniques suggested by Cohen and Manion (1996). For methodological triangulation, I obtained data on reflective processes from interviews, diaries and observational field notes. Combining interview and diary data proved particularly useful as both aimed to elicit similar information through different means. Therefore, I could check ambiguities in interview data against diary data to establish an accurate picture of participants' reflective processes. Also, diaries allowed participants time and space to articulate their knowledge without the pressure in interviews, of having to communicate spontaneously in English.

Also important was investigator triangulation where four colleagues, checked my own analysis of interview data. Using contextual clues plus our knowledge of how Hungarians express themselves in English, we could clarify uncertainties in the data caused by the second language context.

I also validated my data and findings by examining reflection from multiple vantage points. I analysed participants' reflections at different times in the teaching process both pre and post-teaching. I analysed data through both qualitative and quantitative analytic strategies. I examined not only how participants reflected-on-practice and the skills they used, but also the contents of their reflections such as the pedagogic reasons used to explain their teaching. Through this varied approach I tried to gain an accurate picture of my participants' reflective capability.

I am drawn to Rubin and Rubin's (1995) pragmatism over bias in interpretive research. Bias exists and one powerful way of dealing with it is by being reflexive. Seale (1999)

defines reflexivity as conducting an on-going critical reflection of our work, both self-awareness of our own role in research and openness about the research process itself. To recap, given that our implicit assumptions about the world shape our decisions and actions, our underlying theoretical orientations should be made explicit in the research report. Seale (1999:177) writes: 'the attempt to make methodological decisions available to readers of research reports is one way of enhancing the quality of research'. I have attempted to achieve such transparency through the discussion contained in this chapter.

3.2.4 Ethics

Ethical issues were a prime concern for me due to the sensitive nature of my work in which I explored the thinking of my participants, asked them to question and evaluate their teaching beliefs and experiences. This was a new and challenging experience for some participants which induced feelings of exposure and vulnerability and several expressed some discomfort with this type of interaction. Thus establishing an ethical stance of trust and openness between myself and participants was important.

Informed consent is crucial in gaining the trust of research participants (Burgess et. al., 2006) and I strove to fully inform individuals about my study before they committed themselves. To recap, details were contained in an invitation letter sent to prospective participants and I also met participants individually to agree clear guidelines on the conduct of the study. We first clarified information contained in the invitation letter, then agreed on issues such as confidentiality and anonymity and what would eventually happen to the data collected. Finally we discussed participants' individual requests and how they could benefit from participating in my research. Six participants asked me to correct their English on interview transcripts to improve their language skills. Two

teachers requested a report to support applications for study grants. Four teachers requested letters from my University to officially recognise their contribution.

I found it quite hard to establish an ethical stance and deal with the unexpected dilemmas that arose. I occasionally switched off the tape-recorder during interviews when I judged that if any teacher felt she had over-exposed herself, this might jeopardize the trust we were establishing. My actions represented what Bassey terms a clash between my 'Respect for persons' (Bassey, 1999:74) or respect for teachers' confidentiality and privacy, and my 'Respect for truth' (ibid) and the need for honest data. My respect for persons overrode the need for uncensored data but this was an uncomfortable decision to make. However, my emerging awareness of ethical issues marked my growth as a researcher in that eventually all my decision-making considered ethics as a matter of course. In contrast, I addressed ethics superficially in my pilot, only when writing up my report.

3.2.5 Generalisation

Case study research is often criticized for lacking opportunities for generalization as it relies on small, context-specific samples which makes debatable whether findings can be generalised to other settings (Nunan, 1995). Moreover, as case studies often lie within the interpretive paradigm, it may be hard to present findings as universally applicable truths or conclusions (Schofield, 2007).

The traditional view of generalisation, that of establishing principles for universal application based on statistical analysis, is rejected by some researchers as incompatible with case study research (Schofield, 2007). Instead, generalisation is often used to refer to how far researchers can learn from different studies to enhance their own work

(Hammersley and Gomm, 2000). In Stake's (2005) 'naturalistic generalization', practitioners compare then apply information from similar case studies to their own settings. For Donmoyer (2000), generalisation can occur through an accumulation of knowledge. Individuals read various studies similar and dissimilar to their own, gain deeper insight into issues to benefit their own research. Schofield (2007), building on Lincoln and Guba's (2000:40) notion of 'fittingness', argues that generalisation is, 'a matter of the fit between the situation studied and others to which one might be interested in applying the concepts and conclusions of that study' (Schofield, 2007:199).

Researchers who argue for a contextual rather than statistical view of generalization, emphasize the need to provide detailed information of research settings. Lincoln and Guba (2000) and Schofield (2007) for example, criticize Stake's (2005) belief in practitioners' innate ability to judge how different case studies relate to their own work. They argue case studies should be accompanied by a 'thick description' of contexts (Lincoln and Guba, 2000:40), details of the original setting to help readers assess the similarity and relevance of original studies to their own. Likewise, Gomm et. al. (2000) prioritize descriptions of research context in their 'Empirical generalization' (2000:103) where a study acts as an example of a phenomenon the findings of which extend beyond the study itself to a wider populations. For a 'fit' between the case and the target population to occur, researchers should know about and provide detailed information of both the case itself plus the target population and carefully select cases to reflect any diversity that may exist in that population.

Some argue for generalisation in case study on the basis of theory building. Gomm et. al. (2000) suggest that through 'Theoretical inference' (2000:103), conclusions drawn from one case can illustrate or develop a theory which may apply in other settings.

These conclusions, while not statistical, are nonetheless analytical and theoretical in nature. In Yin's 'analytical generalisation' (2003:37, 3rd edn), if different studies using the same theoretical framework generate similar findings, generalisation can be said to ensue. Hammersley et. al. (2000) caution though, that for generalisation through theory building to occur, numerous studies examining the same phenomena should be conducted. Only then can researchers compare conclusions from different studies to assess the feasibility of generalisation across studies. However, such cumulative research is rare (Hammersley et. al., 2000).

My own work is a small-scale, qualitative investigation, set within the interpretive paradigm and I recognise that I should be cautious about generalisations I wish to make. From the preceding discussion, I believe the notion of 'fit' (Schofield, 2007:40) may be the most useful way of addressing generalization in my study. Thus I have attempted to provide the necessary details of my research context to enable readers to judge its relevance and whether the findings can help them understand practice in their own contexts.

3.3 Data Collection

Observational field notes, semi-structured interviews, e-mail diaries and my own research diary were used for data collection as all could provide information on context-embedded behaviour and thinking processes. Data sources consisted of:

- 27 recorded interviews transcribed verbatim: two post-lesson and one planning interview per participant. Participants received copies of their interview transcripts
- 18 observational field notes. Each participant was observed twice and received carbon copies of the notes
- E-mail diaries, consisting of three/four entries per participant

- My research diary

Table 3.3 Data collection procedures

Step	Source	Procedure
1	Observation 1	I observed a lesson and took field notes
	Post-lesson Interview 1	Participant and I discussed the lesson
	Diary 1	Participant wrote about the lesson
2	Planning interview	Participant and I jointly planned the lesson for Observation 2, 1–3 days before Observation 2
	Diary 2	Participant wrote about co-planning
3	Observation 2	See Observation 1
	Interview 2	See Interview 1
	Diary 3	See Diary 1
4	Diary 4	Some teachers additional entries
My Research Diary		

3.3.1 Observations with field notes

I combined observations with interviews to help me understand participants' interpretations of their own practice. I saw a range of lessons and sat at the back of the room recording and commenting on events as they occurred. I had no need to seek approval for access to schools from any official ethics committee, as in Hungary researchers are entrusted with maintaining their own ethical stance. The teachers simply obtained permission from their head teachers.

Observer bias is a well-documented problem with lesson observations where the observers' interpretations of events often differ from the teachers' (Brown and McIntyre, 1995). Malderez (2003) suggests triangulating observation and interview data to combat bias so this is what I did. Malderez (2003) also emphasises how the nature of post-lesson discussions is shaped by the purpose of the preceding observation, so one should be clear from the outset of one's purpose. Observer as teacher educator leads to interpretive interviews, observer as assessor to evaluative ones, observer as researcher to eliciting information often for theory building. Hence, I was diligent in clarifying and maintaining the research purpose of these observations and communicating this aim to the participants.

3.3.2 Interviews

According to Nunan (1995:49), the flexibility of an interview is, 'determined by the nature of the research and the degree of control the interviewer wishes to exert'. The interviews I conducted were semi-structured and combined the exploratory nature of the unstructured interview to allow themes to emerge, with the predetermined nature of the structured interview which could elicit information linked to my research questions. I used interviews because I felt their interactive nature could yield insight into participants' reflective activity and provide the type of data I needed to explore my research questions. Appendix 2 contains the interview protocols used.

Post-lesson Interviews

Interviews were conducted in teachers' schools, directly after the observed lesson. The eighteen post-lesson interviews unfolded in similar ways, were guided by similar core questions but we discussed other topics as they arose. Interviews fell into two sections of (a) "Talking about the lesson" where teachers described and analyzed what had

happened; (b) "Talking about teaching" where we discussed issues related to my research questions such as how they perceived their own teacher learning.

One problem with exploring reflection through interviews concerns the validity of the interview data (Nunan, 1995). I aimed to record reflective thinking and I believe that during section (b) "Talking about teaching" I did just record reflective activity through general questions such as *What do you do if something doesn't work?* However, during section (a) "Talking about the lesson" when participants and I discussed their lessons, questions such as *Why did you...?,* conceivably pushed teachers to analyse their reasoning, perhaps forcing them to face issues otherwise ignored, thus fostering reflection.

I sought to combat this tension between recording and promoting reflection by triangulating diary, observation and interview data. Also, as discussed earlier (page 85) I explored reflection from various standpoints. In these ways, I tried to assure completeness of findings.

Planning interviews

The nine pre-lesson interviews conducted in participants' schools, aimed to construct experience when participants and I planned for what might happen in a lesson, and these interviews were very different in nature from post-lesson interviews. Pre-lesson interviews were far less uniform and I could not predict beforehand the length, structure, contents or my own role in them. Some participants' planning was structured by their course books while others created their own lessons completely. In some interviews I offered directive assistance, informing and modelling what to do. Other interviews were collaborative and participants and I contributed fairly equally to the

interaction. In still others, participants planned lessons with minimal assistance from me. The pre-lesson interviews then were far more unpredictable and complex than post-lesson interviews.

3.3.3 E-mail diaries

All participants wrote e-mail rather than paper diaries for reasons of convenience and to use word processing tools for additional English language support.

In Hungary, teaching practice (TP) journals are compulsory components of teacher preparation courses so diary writing was not new for my participants. At my institution, students keep one Hungarian TP journal and one English TP journal. These contain lesson plans and preparation notes, lesson reports with self-evaluation and are supervised and graded by the mentors.

Despite a familiarity with keeping journals, my pilot study's participants had seemed uncertain about what to write. So for my main study, I helped participants by showing a sample diary entry and providing prompt questions for teachers to follow (see Appendix 3 for the questions). I emphasized that participants could write whatever they wished but in fact they all just followed my questions. For example, they wrote in reply to, *What would you do differently if you taught the lesson again and why?*

> *I think it was OK.* (Amélia, beginner)

> *To do the discipline better. I am not know how still.* (Bella, accomplished beginner)

I would change the start because the pupils were too noisy for the activity. I would do the original plan where pupils collected words around the clothes topics not answer questions. (Cecília, experienced)

For Nunan (1995), diaries are invaluable in research as they allow insight into learning processes difficult to obtain through other means. However, my participants' diary entries were short, described not analysed practice and did not really offer an accurate picture of their reflective thinking. This might be because TP journals in Hungary constitute records of work rather than in-depth analyses of practice and participants simply felt uncomfortable exploring their thoughts. Or, as mentioned earlier, Hungarian TP journals are graded by mentors and good grades bring financial benefits to Hungarian students. So to obtain good marks, students may write briefly and what they think their readers want to read rather than highlighting their own mistakes through self-critical analysis of practice. However, despite their non-reflective nature, the diary entries did reveal useful information about research-related issues such as primary teaching in Hungary. So heeding Nunan's advice (1995) to use diaries in methodological triangulation, I employed diary data to validate information from interviews and observations.

Some researchers argue that making explicit one's reasoning and perceptions in diary writing can promote self-reflection (Porter et. al., 1995) but others claim there is little research-based evidence to support this view (Mackintosh, 1998). I recognised though that potentially, a tension may exist between recording and promoting reflection and addressed this through two measures. First, I restricted participants' diary writing to specific experiences on specific occasions (e.g. after each interview) rather than over an

extended period of time. As Freeman (1996) argues, reflective capability is promoted when participants reflect long-term, systematically, in varied contexts and I did not allow this to happen. Secondly, participants recorded but were not specifically asked to analyse their thinking by reflecting on their accounts, something diarists must do for reflective capability to develop (Bailey, 1995).

The diary entries tended to be brief and fairly non-reflective so I do not believe that asking participants' to write about teaching fostered their reflective capacity. I do believe though that I, in writing in my own research diary, did develop my own reflexivity as a researcher.

3.3.4 Research diary

I recorded summaries and plans of my work, problems that occurred and possible solutions, questions that arose and topics for further study. As such my diary structured my work and evolved into a complex story of my research journey and my development as a researcher. I recorded my own reflections on research events which proved useful in supporting data analysis for triangulation purposes. I wrote after one interview *Bella got tired quickly - had to stop* which complemented my analysis of interview data which suggested that some teachers found reflecting on teaching in English particularly challenging. I also recorded my feelings about doing research, my frustrations when I *got stuck* (Research diary), or the dilemmas I faced over what constituted ethical behaviour. Although I was unaware of it at the time, I firmly believe that articulating my developing thoughts and actions in this way did foster my self-awareness of my own practice and enhance my own reflexivity.

CHAPTER FOUR FINDINGS

Chapter Four begins with a description of the qualitative and quantitative procedures used to analyse data, followed by a presentation of the findings resulting from the data analysis.

4.1 Data Analysis Procedures

4.1.1 Qualitative analysis

In qualitative analysis I followed a grounded theory approach (Strauss and Corbin, 1998, 2nd edn) because I felt enabling theory to emerge from data rather than starting from a predetermined theoretical position, complemented the feeling of excitement and discovery I had about my research. I also felt as Strauss and Corbin (1998, 2nd edn) note, that analyzing data from a theoretical position can prejudice what is uncovered and while my pilot study had resulted in a provisional set of propositions, these served to highlight themes for further development rather than constituting a fixed theoretical position. Of all the coding procedures offered by the literature, I found Rubin and Rubin's (1995) the easiest to use with its clearly articulated guidelines and practical examples. Following their procedures, I first coded data by identifying concepts and placing these into thematic categories that related to the research questions. Then, I interpreted those themes to address my research questions.

The pre and post-lesson interviews were very different in nature so I analyzed them separately. My analysis procedures were similar for the two sets of data, although different themes emerged.

4.1.1.1 Category formation: Post-lesson data

To impose some structure on my data, I worked through four steps.

- I divided up all eighteen post-lesson interviews into two broad sections of (a) "Talking about the lesson" and (b) "Talking about teaching".
- Working with one beginner teacher's interview, I divided sections (a) and (b) into segments according to the purpose of the interaction. For example, (a) "Talking about the lesson" contained segments such as "Discuss the activities" and (b) "Talking about teaching" contained segments like "Describe teacher learning".
- Through line-by-line analysis, I identified within each segment concepts that spoke to my research questions. For instance the phrase, *I decide on the spot to...*I labelled as "Reflection".
- After much reworking, concepts were refined until richer, clearer, more consistent categories emerged. Thus, "Reflection" subdivided into "types of", "problems with", "time of" reflection.

I repeated this process with an accomplished beginner's and then an experienced teacher's transcripts. Similar categories emerged which suggested that these could constitute the themes I could use to address my research questions.

Then using investigator triangulation, my own interpretations were checked and my analysis refined by four colleagues. Together they analyzed the same three interview transcripts of a beginner, accomplished beginner and an experienced teacher. Initially, I did not participate in their discussion but just recorded their comments. Our interpretations were similar but not identical and the ensuing discussions helped clarify our decision making. For instance, one participant's comment *I think it* (the task) *was good* triggered discussion on whether she was evaluating or giving an opinion on a task.

We eventually decided on "evaluating" as the contextual clues indicated that she aimed to give an evidence-based judgement on rather than an opinion about the task.

Eventually one coding system was agreed upon that was appropriate for analysing post-lesson interviews and diary data. Five main categories emerged to accommodate reoccurring concepts:

Cognitive skills: these were the six skills teachers used when deconstructing their teaching experience: Describing, Pedagogic Reasoning, Evaluating, Predicting, Commenting, Problem Solving.

Reflection: this included information on different types of reflection, teachers' perceptions of and problems they experienced with reflection.

Context: this included any information that referred to contextual influences on their thoughts and actions.

Planning: this included problems with planning, planning strategies and procedures, usefulness of co-planning.

Teacher learning: this included information on teachers' perceptions of themselves as teachers, their own learning including sources of learning, their educational beliefs, what helps or hinders teaching/learning.

Finally, my colleagues and I individually checked a fourth transcript using this coding system. I then used these categories to code the remaining post-lesson data. Appendix 4a. contains an example of one full interview transcription and 4b. an example of how that interview was coded.

4.1.1.2 Category formation: Pre-lesson data

Pre-lesson data was also coded through theme analysis and I followed the four steps described above. Initially four categories emerged, similar to the post-lesson categories.

Reflection: see post-lesson category for "Reflection"

Context: see post-lesson category, "Context"

Planning: see post-lesson category, "Planning"

Teacher learning: what participants learnt from co-planning, how co-planning supported learning.

Pre-lesson interviews were more unpredictable than post-lesson interviews and category formation was more challenging. As I engaged with the data, the category boundaries increasingly blurred and teachers' comments simultaneously fitted into several categories (see examples below) so confusing messages appeared to emerge. Eventually, the four initial categories evolved into two larger categories which did accommodate the data unambiguously. These two main categories are:

Problem Setting: this characterises the processes participants used to define and represent their planning situations. Problem Setting was explored from two interrelated aspects.

Deliberate approach characterises how participants analyzed their contexts when creating a representation of the planning problem. It refers to the time teachers invested, the contextual features they considered, including constraints on progress.

Framing characterises how participants decided on and described the salient features in their planning contexts. It refers to participants identifying their start and goal points plus selecting and describing activities to link up the two.

Interpreting: this describes the processes teachers used to make sense of their situations and was divided into two interlinked areas.

Drawing inferences explores how participants understood the significance of and drew inferences from what they perceived. Drawing inferences accommodates activities such as analysing tasks to select and structure content, predicting possible problems.

Principled approach examines how participants analysed their situations and whether they referred to a situation's underlying principles rather than surface features. A principled approach accommodates activities such as identifying reasons for one's actions, a task's aims, a problem's cause.

The following three examples illustrate the transition from the four initial to two final categories.

Example one: "Context" to "Problem Setting"

Csenge is starting to plan her lesson. She explains that Hungarian parents buy all schoolbooks and so expect children to be taught from the books. This is why she rigidly follows the textbook regardless of its effectiveness.

> *...when planning you have to take into consideration the parents as well. So if they buy a very expensive course book...then parents ask "Why did we have to buy the book if you never use it?....So...the basic should be the book.* (Csenge, experienced)

I initially categorized Csenge's comment within "Context" because contextual realities (parents buy books) influenced Csenge's planning decisions to teach from the book. Then I considered her comment in terms of the contextual features she addressed and the time she spent analysing her planning situation, and characterised her approach as deliberative. Eventually I accommodated her comment within the category "Problem Setting".

Example two: "Planning" to "Problem Setting"

Amélia is starting to plan her lesson. She refers to the textbook page and talks through the exercises thus:

> *I have to teach this the past tense form, "to be" and maybe "have"...First I show this pictures because children likes pictures...And there are some words they don't know....example... "Temperature.....last week".* (Amélia, beginner)

I initially categorized this within "Planning" because her planning strategy was to follow the book's exercises. Then I looked at how she analysed her planning context, that because she immediately planned the lesson details without really considering any contextual variables, she was non-deliberative. I eventually accommodated her comment within "Problem Setting".

Although initially I classed Csenge's comments within "Context" and Amélia's within "Planning", I felt Csenge's comments also fitted within "Planning" given that her planning strategy was to follow the book. Likewise, Amélia's comments also fitted within "Context" because she considered few contextual features, just the pupils and the book. Put differently, the functions of the four initial categories were unclear. This

could have impeded theory building where understandings are gained by identifying clear relationships between well-defined categories drawn from the data. However by enclosing "Context" and "Planning" within "Problem Setting", data was accommodated more unambiguously to benefit theory building.

Example three

Example three, in which Anikó and I co-plan a letter writing lesson, illustrates the transition from "Teacher Learning" to "Interpreting".

Int. *How are you going to highlight the layout...'cos it's different in English?*

Anikó *I tell in Hungarian.*

Int. *...yes...or...you could ask..."Is it the same as a Hungarian letter?.....Where's the address?"*

Anikó ....(pauses).....*and..."How to finish the letter?*

Int. *Yes...and....."Love" or maybe "From"*

Anikó *...and..."How do you start the letter?"....and the...."Dear"... and the name.*

I initially categorised this as "Teacher Learning" because Anikó was learning a new teaching procedure. Then I considered how my questions highlighted aspects to help Anikó analyse and structure, that is to interpret the task effectively. Eventually I accommodated the exchange within "Interpreting".

I coded one interview by myself then repeated the analysis with one colleague to check and refine my interpretations.

4.1.2 Quantitative analysis

Quantitative analysis was restricted to section (a) "Talking about the lesson" in post-lesson interviews. To gain insight into how teachers reflected on teaching, I calculated how often teachers used the six above-mentioned cognitive skills when deconstructing lesson experiences. Post-lesson interviews all fell into regular enough formats to allow for such numerical analysis, but pre-lesson interviews were too irregular and diary entries too brief to yield enough useful information. My aim in examining the skills participants used, was to access how they thought about rather than spoke about their lessons. For example, if a teacher used more descriptive than analytical skills, this might suggest a descriptive approach to reflection whereas using more analytical than descriptive skills might suggest a more analytical approach.

In "Identifying Skills" below I present the category system employed to identify the skills participants used, a system that emerged from my own data. Then, "Frequency of Use" (page 110) details how I calculated as a percentage how often participants used particular skills.

4.1.2.1 Identifying Skills

As Hammersly (2007) notes, when data collected qualitatively undergoes quantitative analysis, it is important for reasons of reliability to make explicit the category system used to accommodate the data. In Chapter Two, I discussed various frameworks that characterize levels of reflection but for various reasons decided none of these were appropriate for my purposes. So, I felt justified in developing my own system.

Establishing my category system worked through three steps. First, through qualitative analysis, I identified six skills used by the participants to process information when

deconstructing experience. Second, my colleagues checked and refined my interpretations. Third, to enrich my category system, I consulted the literature to see how other researchers defined and characterized cognitive skills similar to the ones I had identified.

My category system distinguishes between the single descriptive skill of "Describing", and five analytical skills which all involve some attempt to examine the constituents of a teaching experience, to understand how these constituents relate to better understand the whole. These analytical skills are: Pedagogic Reasoning, Evaluating, Predicting, Commenting, Problem Solving.

Descriptive skill

1. Describing

"Describing" is when teachers just reported or gave factual accounts of classroom events with no attempt to analyse them. "Describing" answers: *What happened? What was the aim? What's a task/pupil like?* For example:

> *And then I stopped them and told them "OK, listen to me. Here you're working in 3 groups....*" (Csenge, experienced, Interview)

"Describing" features at the simplest level in many frameworks of reflection (Hatton and Smith, 1995) and is not generally considered reflective. In my study teachers used "Describing" for their lesson aims, tasks, pupils, their plans, and their feelings as a teacher.

Analytical skills

2. Pedagogic Reasoning

"Pedagogic Reasoning" refers to how teachers explained their understandings of teaching events from a pedagogical point of view and answers *Why?* questions: *Why did I do this or make this decision? Why did this happen?* For Shulman (1987) one way in which teachers develop their understandings of teaching, is by explaining their actions using reasons drawn from pedagogy. Thus "Pedagogic Reasoning" is a bridge between what teachers know about pedagogy and their actions in the classroom.

I divided "Pedagogic Reasoning" into three categories according to the sources of knowledge teachers used in their reasoning, to uncover whether teachers of differing experience rely on different sources. My categories correspond to the three levels of reflection contained in many frameworks summarized in Chapter Two. However, because I concentrated on just examining reflection from a cognitive perspective, I focused mainly on knowledge sources teachers used and not for instance, affective factors contained within some frameworks. The three categories are:

Pedagogic Reasoning: Simple. Participants relied mainly on personal opinion or experience to explain their understandings of their teaching (e.g. Van Manen's 'technical reflection', 1977). For instance:

> *....revising the chant was the best thing.....because they like doing chants.* (Boglárka, accomplished beginner, Interview)

Pedagogic Reasoning: Intermediate. Participants used a wider range of more exploratory reasons including those from pedagogy, in a more analytical questioning manner, drawing on multiple not just single perspectives (e.g. Ross's 'Level 2', 1989).

> *...it's easier to them to....remember the words....'cos they can touch them....We have learn about this in psychology, too...hear it, they see*

it, they feel it, they say it at the same time. (Atilla, beginner, Interview)

Pedagogic Reasoning: Critical. Participants drew on knowledge relating to their socio-cultural contexts (Zeichner and Liston's 'Critical reflection', 1987). Once for example, one teacher explained her pupils' reluctance to solve problems in groups by referring to Hungarian academic traditions where understandings gained from searching for what we do not know, is undervalued:

> *Again it comes from history. So if you think about teaching in Hungary, you the teacher are the authority in the classroom. You go in, close the door and you know everything....because you are the source for the children. And nowadays, it is very difficult to make them understand that, if you don't know something it isn't a problem because you are a person*...(Csenge, experienced, Interview)

3. Evaluating

For Richards and Lockhart (1994), "Evaluating" is prompted by questions teachers ask themselves leading to judgements on the value of their actions: *What were the strengths or weaknesses of a task, my pupils, me as a teacher? What should I have done differently?* Through "Evaluating" we make evidence-based judgements on the worth of specific events. For example:

> *The least successful was the first one.....But the second one the miming, was I think clearer for them and they did well. The third one was the miming...the second and the third were better then the first.* (Cecília, experienced, Interview)

My participants' evaluations fell into three areas suggested by Richards and Lockhart (1994) of evaluating lessons/tasks, pupils and themselves as teachers.

4. Predicting

With "Predicting", there is evidence that the participants forecast prospective teaching phenomena, perhaps estimating their pupils' knowledge on a topic or anticipating how a teaching situation might unfold:

> *I wrote some optional activities because...*(if) *a given exercise doesn't work in that way I thought would work, then I have to change on-the-spot.* (Cecília, experienced, Interview)

5. Commenting

"Commenting" refers to the strategies participants used to create a more complex way of speaking. Expert practitioners articulate in elaborate ways to provide themselves with increased opportunities for inferential reasoning (Lesgold et. al., 1983). I used the term "Commenting" to characterize how teachers embellished their talk as I could not find an appropriate term in the literature. "Commenting" was accomplished through two strategies:

> Commenting: Opinions. Teachers expressed a view/opinion on a previous statement, often based on their general beliefs.
>
> Commenting: Elaborating. Teachers gave examples of, added information to, made observations about a previous statement.

> *I tried to find certain points of the lesson that I put in these co-operative techniques...*(Statement).....*I think that competence-based teaching needs these kind of co-operative techniques* (Commenting:

Opinion)...*but our students are not really prepared for it...because in other lessons they don't really use them.* (Commenting: Elaborating)....*So, what I think...language lessons are really very good for introducing...these techniques.* (Commenting: Opinion)

(Csenge, experienced, Interview)

6. Problem Solving

"Problem Solving" draws on the four problem solving processes characterized by Mayer (1996) of representing, planning, executing and controlling. I used these processes to characterize the problem solving activity of my participants thus:

- Identifying the problem's most significant features. This answers the question, *What's the problem?* and corresponds to Mayer's 'representing' (1996:551).
- Identifying the cause: *Why did this occur*? This focuses on one part of 'representing' (ibid), of recognising the problem's underlying principles. It is included separately to see if, as suggested by Chi et. al. (1981), experts attend to underlying causes when solving problems but novices to surface features.
- Identifying solutions relates to *How can I solve it?* and refers to participants selecting and/or carrying out solution strategies. It relates to Mayer's 'planning' and 'executing' (ibid).
- Evaluation: *How can I reflect on this problem solving episode?* This corresponds to Mayer's "controlling" where participants evaluate or comment on some aspect of the problem solving process.

There are some pupils who are absolutely are not interested in studying English and among the 20 there are about 3 or 4 of them (Identifying problem). *I have tried different things. But the only thing*

that worked with them, is when they have to create something in groups. Then they are really interested in (Identifying solution). *However if we do these kinds of things all the time then they don't learn the material they should by the end of the school year* (Evaluation of solution)...*English is a little bit over their head...very difficult to work with them because they always feel that the others are much better* (Identifying cause). (Csilla, experienced, Interview)

All these skills, except "Problem Solving", are conceivably 'low inference categories' (Hammersly, 2007:145) that are easy to describe and can accommodate data unambiguously. "Problem Solving" though underpinned the other analytical skills and could not be similarly isolated. For example, teachers often evaluated tasks by identifying and analysing the problems that occurred, or predicted events by identifying problems that might occur. In these cases I labelled teachers' behaviour as "Evaluating" or "Predicting" respectively according to the main purpose of their interaction.

It is worth emphasizing two points concerning quantitative analysis. First this analytic strategy refers only to the category of "Cognitive Skills" in the interview section (a) "Talking about the lesson". Second, I could calculate and compare the frequency of use of "Pedagogic Reasoning", "Commenting", "Predicting", "Describing" and "Evaluating" because these skills could be easily distinguished from each other. I could not however similarly isolate "Problem Solving" and made no attempt to calculate its frequency of use. Instead, "Problem Solving" was analysed qualitatively.

To reiterate, section (a) "Talking about the lesson" was organised into segments such as "Describing activity 1", segments which represented the events of the lesson. I then

identified which skills teachers used to discuss these events, thus gaining insight into how they reflected. The following extract illustrates how I identified skills one teacher used to process information (Appendix 4b. contains the full version of the coded interview). This extract is taken from a segment "Discuss activities 1 and 2":

> *...at the beginning we started with general questions* (Describing task) *and after the weekend it's quite good and it's quite difficult for them to acclimatize and it helps to start English* (Commenting: Opinion)*...then came the hangman game...the letters on the board game* (Describing task) *and although we do it quite often, I don't...didn't mind it* (Commenting: Opinion), *because spelling is quite difficult sometimes for them* (Pedagogic Reasoning: Simple). (Csilla, experienced, Interview)

4.1.2.2 Frequency of Use

Having identified the cognitive skills teachers used to reflect on lesson events, I then recorded how often each teacher used a given skill on two tally charts, one chart for Interview 1, another for Interview 2. I then converted the resulting numbers into percentages to facilitate a comparison between participants, percentages which were eventually represented visually on bar graphs. Completed tally charts for Interviews 1 and 2 appear in Appendix 5, but Table 4.1 records the skills used by one beginner (Atilla) and one experienced (Csilla) teacher when deconstructing lesson events in a) "Talking about the lesson" during Interview 1.

Table 4.1 Sample Tally Chart 1

		Descriptive	Analytical								
Participant	**No. of occasions**	**Describing**	**Pedagogic Reasoning**			**Commenting**		**Evaluating**			**Predicting**
Atilla	**31**	**14**	**7**			**5**		**4**			**1**
(A3)			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps	
			5	2		3	2	3	1		
	100%	45.2%	22.6%			16.1%		12.9%			3.2%
Csilla	**49**	**10**	**10**			**15**		**12**			**2**
(C1)			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			6	4		8	7		5	7	
	100%	20.4%	20.4%			30.6%		24.5%			4.1%

Table 4.1 shows that Atilla when discussing lesson events, used the five skills represented in Table 4.1 on thirty-one occasions as indicated by the number "31" in the column "No. of occasions". "Describing" was used fourteen times; "Pedagogic Reasoning" was used seven times (five at a "Simple", two at an "Intermediate" level); "Commenting" five times (three for "Opinions", two for "Elaborating"); "Evaluating" four times (three for "Self", one for "Task/Lesson) and "Predicting" once. Percentages were obtained by dividing the number in a skill category by the total number of occasions skills were used, then multiplying by 100. Thus for "Evaluating", 4 ÷ 31 x 100 = 12.9%.

These percentages represent how often participants used each skill as a proportion of their total skill use when reflecting on their lessons. The percentages aim to offer insight into the focus of teachers' thinking. For Atilla, 45.2% of total skill use was devoted to "Describing". Thus when Atilla reflected on his lesson, 45.2% of his contributions involved describing aspects of the lesson. In contrast, 54.8% of his contributions involved analysing phenomena of which 22.6% explored reasons for events ("Pedagogic Reasoning"), 16.1% of contributions involved making talk more informative and complex ("Commenting"), 12.9% involved evaluating phenomena ("Evaluating") and 3.2% involved predicting ("Predicting").

In contrast, percentages for Csilla indicate that when she discussed her lesson, 20.4% of her contributions involved describing aspects of the lesson given that 20.4% of her total skill use was devoted to "Describing". Therefore the remaining 79.6% of contributions involved analysing lesson phenomena. It is conceivable then, that Csilla reflected in a more analytical manner than Atilla because a higher proportion of her total skill use was devoted to using analytical skills.

I recognise that these percentages obtained through quantitative analysis are only one rough indication of the focus of teachers' thinking when reflecting on teaching and can just complement and support my main analytic strategy of qualitative analysis. Reflection by its very nature is multi-layered, complex and so hard to represent through percentages on graphs which may distort the information they purport to portray. A high percentage for "Pedagogic Reasoning" for instance, may suggest thoughtful, effective reflection, but qualitative analysis may reveal superficial reasoning and so poor reflection.

Despite these limitations, quantitative analysis definitely helped me picture how each participant deconstructed teaching experiences. The graphs revealed changes in participants' individual skill use in Interviews 1 and 2 and that most increased their analytical skill use. The graphs also revealed differences between the three groups of teachers, showing for instance that experienced teachers used proportionally more analytical skills than the beginner/accomplished beginners. Qualitative analysis provided depth of understanding and gave insight into teachers' thinking during post-lesson reflection but did not draw out factors in a way that could provide a convenient basis for comparison. Quantitative analysis provided breadth of understanding and the graphs usefully revealed variables initially missed through qualitative analysis. I believe on their own, the qualitative and quantitative analytic strategies were insufficient. Taken together, the two strategies complemented each other in a way that strengthened the rigour of my work.

4.2 Presentation of Findings

My presentation of findings is structured through Research Question 1, "Do differences exist in reflective capability between nine Hungarian EYL teachers (English to Young Learners) with differing levels of teaching experience? If so, what are the differences and why might they occur?" I discuss these findings in Chapter Five.

The reflective capability of participants was examined on a number of levels. I analysed reflection before and after teaching, through oral and written modes, using qualitative and quantitative analysis. The differences that I found did exist are organised under the headings of three findings:

> Finding 1: Beginner and accomplished beginner teachers reflected in ways similar to each other but differently from experienced teachers
>
> Finding 2: Reflective capacity developed between post-lesson Interviews 1 and 2 for beginner/accomplished beginner teachers
>
> Finding 3: Co-planning proved an effective point of intervention for developing reflective capability

4.2.1 Finding 1

Beginner and accomplished beginner teachers reflected in ways similar to each other but differently from experienced teachers

I drew this conclusion from my examination of three perspectives.

1. Teachers' implicit beliefs about education
2. Anticipatory reflection: participants reflective capability at the pre-lesson stage

3. Retrospective reflection: reflective capability post-lesson

4.2.1.1 Teachers' implicit beliefs about education

The lens through which teachers see their worlds, moulds their reflections about their teaching. Therefore, information on participants' beliefs about education can offer insight into how they interpreted classroom phenomena.

Beginner/Accomplished Beginners

These six teachers perceived primary English teaching in a way that reflected traditional assumptions about education underpinning the Hungarian system but overlaid by some modern EYL techniques. The beginner/accomplished beginner teachers incorporated many principles of good primary practice. They were supportive to their pupils and mostly used English throughout the lessons. Lessons were lively and teachers interacted with pupils in ways conducive to second language acquisition, for example, reformulating and extending pupils' talk (Pinter, 2006). They used up-to-date, UK published textbooks and incorporated many activities with movement, fun and interest such as songs, rhymes and games, appropriate to the pupils' levels of conceptual development and maturity. Pupils' motivation was important which teachers interpreted as how much fun pupils had.

All beginner/accomplished beginners clearly perceived their roles as "teacher as entertainer" as indicated by the images they used to describe themselves. In various diary entries (in response to *How do you picture yourself as a teacher?)* the three beginner teachers wrote, *My lessons are spinning* (Amélia), or *When I'm teaching I am always smiling* (Anikó), or *I am....like a chameleon.....I do not want the kids to be bored, so I always try showing them something new* (Atilla).

One accomplished beginner wrote, *The main principles of my teaching are a good feeling, cooperation, efficiency. I built on enjoyable activities such as games, rhymes, songs* (Bettina) and another *(I am) a magician.....a market trader in Ancient Rome* (Bella). If, as Munby and Russell (1990) suggest, the images through which teachers portray themselves represent how they construct the teaching/learning process, then entertainment was indeed a priority.

The beginner/accomplished beginner teachers also shared traditional assumptions about second language learning. Lessons were tightly controlled and interaction was mainly teacher-directed. Pair and group work was almost non-existent and several times I saw course books' interactive activities exploited traditionally, for example with pair work performed between teacher and pupil. In fact several teachers expressed discomfort about incorporating anything other than teacher-directed interaction, one accomplished beginner explaining that until very recently anything but whole-class interaction was actively discouraged by teacher preparation courses. She said:

> *I use pair work sometimes but not too often....Because we learn such things that we can't use this...form.* (Bettina, accomplished beginner, Interview)

As is customary in Hungary, there were frequent changes of activity and the pace was kept lively by teachers constantly asking questions to maintain pupils' attention. Lesson content focused on teaching grammar and vocabulary where teachers provided input which pupils then practised through games and songs. There was almost no opportunity for pupils to construct their own phrases in English, and when they did speak English they were heavily corrected. Pupils had limited opportunity to explore or take

responsibility for their own learning through problem solving, collaborative tasks or any creative tasks.

Experienced teachers

The experienced teachers held markedly different assumptions about teaching and learning. They clearly perceived themselves as guides, nurturing knowledge, fostering children's instincts and abilities through a collaborative process. In various diary entries they described themselves as, *A helping hand...guide them.....but giving them the chance to explore, search and find out* (Csilla), or *I'm like a gardener who takes care of her plants to help them to grow* (Csenge) or, *I'm like a coach who knows how much students have to train and what* (Cecília). Certainly the lessons I observed supported this "teacher as nurturer" view. The pace of lessons was visibly slower, with an exploratory, supportive feel. Learners worked together, independently from the teacher, free to construct their own English phrases even though this involved language mistakes. Csenge commented:

> *I'm so happy when they are brave enough to say words in English.....even if it is not correct grammatically...even if it is "I like talk" or whatever.....But they put together what they want.....*
> (Csenge, experienced, Interview)

I saw a variety of lesson types but all the experienced teachers aimed to develop competencies such as intercultural skills and socialization skills through co-operative learning, as well as language skills.

It is perhaps unsurprising that the beginner/accomplished beginner teachers favoured a fairly traditional approach to EYL despite encountering an alternative methodology on

their English methodology programmes, as the education system within which they work and study and which shapes their beliefs about education is a traditional, transmission model. The experienced teachers though also operate within the same system, but construe their English teaching through a constructivist lens. Why they seemed to perceive education so differently might lie in the sources of learning teachers used for their own professional growth.

I elicited information concerning participants' perceptions on their teacher learning through various diary and interview questions. This information is summarized in Table 4.6. "Sources of Learning" (page 155) and is discussed later in this chapter. It emerged that the experienced teachers (but not the beginner/accomplished beginners) valued sources that gave them access to international perspectives on education such as using UK published resource books, attending training courses/conferences organised by international bodies. Conceivably the experienced teachers, through long-term exposure to international perspectives, had assimilated the constructivist philosophy of learning underpinning such perspectives.

4.2.1.2 Anticipatory Reflection

Anticipatory reflection involves constructing practice whereby new understandings developed from deconstructing practice are used to inform future practice. I suggested earlier that anticipatory reflection is triggered through the activity of planning. Therefore, I examined teachers' planning practices to gain insight into the nature of their anticipatory reflection. Findings revealed that the anticipatory reflective skills of the beginner/accomplished beginner teachers were similar to each other but different from experienced teachers.

Loughran (1996:20) characterizes anticipatory reflection as, 'framing a problem before it occurs'. This involves skills such as interpreting and analyzing the prospective context, defining that context, anticipating and hypothesizing about what might happen, weighing up possible courses of action and planning to implement changes resulting from understandings gained from past actions.

All nine participants clearly construed both anticipatory and retrospective reflection as a form of elaborate problem solving. One experienced teacher described pre-lesson thinking thus:

> *If it is something totally new it takes more time to solve it when I look at the material and think about what I want the students to learn and how am I going to do it.* (Cecília, experienced, Planning Interview)

And a beginner described post-lesson thinking thus:

> *I try to memorize what was the problem, and how I can.....solve them the next lesson.....Sometimes I try to solve it...in the lesson sometimes I have to tell the task in Hungarian....or if not, I try to do it in another way next lesson.* (Anikó, beginner, Interview)

The research literature distinguishes between well-defined and ill-defined problem solving and my participants' characterisations of pre and post-lesson discussions were remarkably close to these distinctions. The planning process was likened to ill-defined problem solving and participants characterized it as complicated, as analysing contexts that were not yet fixed and involving uncertainty. Post-lesson discussions involved analysing known phenomenon, akin to well-defined problem solving. Csenge wrote:

Talking before a lesson is always full of thoughts and predictions and supposed reactions of the classes, afterwards there are always facts and evidence in your hand to talk about. (Csenge, experienced, Diary)

And Bettina:

Before the lesson, I try to imagine the lesson and I try to plan...the reaction of the children. But after the lesson we analyse this reaction and things. (Bettina, accomplished beginner, Interview)

And Amélia:

Before the lesson...we can discuss and think the ideas, aims, the method the problems and everything what I have to do in my lesson.....talking after the lesson helps me to understanding the problems, timing and the pupils' reaction that we can't discuss forward. (Amélia, beginner, Diary)

Solving ill-defined problems is far more demanding than solving well-defined problems and practitioners must first transform ill-defined into well-defined problems prior to solving them. Certainly the beginner/accomplished beginner teachers struggled far more analysing teaching before rather than after the lesson, with anticipatory rather than retrospective reflection. Planning was time-consuming and challenging. As Amélia recorded:

For me easier to teach a lesson and stand before the children than I plan my lesson. I have to think through each steps and think about

why I do this and that and what I will do after. (Amélia, beginner, Diary)

Information on participants' anticipatory reflection is presented through two main categories which emerged through qualitative theme analysis. They are (i) "Problem Setting" and (ii) "Interpreting", both of which can be considered as metaprocesses, as activities we use to direct our own behaviour (Eraut, 1994). For Schön (1983) "Problem Setting" and "Interpreting" are two reflective processes characterized in the 'appreciation'/'reappreciation' (Schön, 1983:132) stages of the reflective cycle, processes we use to re-examine our implicit understandings, leading to knowledge growth.

(i) Problem Setting

Schön uses 'Problem setting' (1983:40) to describe how teachers make problematic situations more manageable by defining them, largely by identifying what salient features to attend to. "Problem Setting" considers: 'the decision to be made, the ends to be achieved, the means which may be chosen' (Schön, 1983:40). "Problem Setting" is akin to the problem solving process of 'representing' (Mayer, 1996:551) which helps skilled practitioners construct reliable mental representations of their problem situations to facilitate solution procedures. To recap, 'representing' involves defining the problem space, by identifying the start and end points and the steps that link the points up, plus constraints to this process.

If planning is characterized as ill-defined problem solving, then teachers must engage in "Problem Setting" in order to define the problem space of their prospective teaching

contexts. To determine differences between how my nine participants did this, "Problem Setting" was explored from two interrelated aspects.

Deliberate approach: This refers to the manner in which teachers analyzed their planning contexts. It was included to focus attention on whether as suggested in the literature (e.g. Voss et. al., 1983) experts invest far more time representing the problem to be solved, considering a wider range of contextual factors and possible constraints on progress than novices who proceed more directly on to searching for solutions.

Framing: This is when, 'we name the things to which we will attend and frame the context in which we will attend to them' (Schön, 1983:40). Framing explored how teachers decided on and described the salient features in their contexts, such as identifying their start and goal states plus selecting activities to link up the two.

(ii) Interpreting

"Interpreting" refers to the processes teachers used to make sense of their situations and was divided into two areas.

Drawing inferences: This explores how participants understood the significance of and drew inferences from what they perceived. It was included to see if experts can indeed infer and predict information more effectively than novices (Borko and Livingston, 1989). It accommodates activities such as analysing tasks to select and structure content, anticipating problems.

Principled approach: This examines whether teachers analysed their situations by referring to underlying principles rather than surface features. It involves clarifying the

purposes and reasons for one's actions, a task's aims, a problem's cause. It was included to focus attention on whether expert practitioners do indeed approach problematic situations in principled ways (Chi et. al., 1981).

Having defined these two categories, my analysis of participants' anticipatory reflection is presented under the headings of "Problem Setting" and "Interpreting".

4.2.1.2.1 Problem Setting

Deliberate approach

The experienced teachers took a far more deliberate approach in representing the situation to themselves than beginner/accomplished beginner teachers. They invested time assessing and defining their planning contexts, considering a range of features before moving on to the details of their plans. Csenge described her planning procedures thus:

> *I usually take in consideration the central and local documents as guidance and I look through my course book as well. I also consider the level and needs of my group. I always plan the frame of my lesson first and then fill it in with the details.* (Csenge, experienced, Diary)

NB: "central and local documents" mean the National Curriculum (NCC) and curricular produced by local education authorities.

In addition to the NCC, textbooks and pupils, the three experienced teachers also considered their own teaching beliefs (e.g. the importance of developing socialization skills), parents (Hungarian parents buy textbooks so expect them to be used), school's expectations (e.g. training pupils for language competitions), practical constraints such as the time and day of the lesson or availability of equipment. Also, they used their past

experiences to inform their planning situations, by drawing analogies with past plans to clarify current ones, or by feeding information from previous lessons into current and future ones. They all perceived each lesson as part of larger schemes of work.

In contrast, all beginner/accomplished beginner teachers adopted what I termed a "here and now" planning approach (Research diary) in that they just considered the information immediately to hand namely, their textbooks, perhaps their pupils, but with no reference to contextual features. They spent less time organising and understanding the planning problem, omitted completely the stage of reflecting on the planning context and proceeded directly onto planning the textbook activities. Atilla described his planning as:

> *reading the Teacher's Book and.....I just make a draft list of my ideas.* (Atilla, beginner, Interview)

It was unsurprising that the beginner teachers were less deliberate when planning, as their limited teaching experience clearly restricted their ability to use analogies with past plans or possess working knowledge of the NCC. It was surprising though that the accomplished beginner teachers also adopted the "here and now" approach of the beginners. They did not appear to use the knowledge developed from their Hungarian teaching experience in their English lesson planning, such as how the time and day of the lesson could impact on learning, the availability of tape recorders, previous and subsequent lessons, school expectations, official documentation. This may indicate a lack of transfer of reasoning skills from their specialist subject of Hungarian teaching to their new subject of English teaching.

Framing

There were also differences in how teachers framed their planning contexts something the experienced (but not the beginner/accomplished beginners), could do effortlessly. In this extract Csenge simultaneously examined one particular textbook page and framed her plan:

> *...they are the stronger students.....this means that we can maybe use some supplementary materials as well.....So we will start a new topic....“My School”. We will talk about subjects we’re learning at school.....the timetable.....and if I think about the skill development....this is a listening and speaking lesson.....I know that their....previous knowledge is the day names in English.....and I think some subjects not too many...I will see in the lesson.....there will be an elicitation somewhere in the lesson...And then we will do the listening...about a British school. And then we’re going to compare it with our school.....by the end of the lesson hopefully, we will get to a comparison.* (Csenge, experienced, Planning Interview)

She began in the manner of expert problem solvers, by developing a representation of the problem space. She identified her given state *“My School”,* the goal state *we will get to a comparison*, and the procedures that link the two (e.g. teaching *subjects*, *the timetable*, *listening*). Her starting point then was to transform her ill-defined situation into a well-defined one to make it more solvable. The other two experienced teachers adopted a similar approach. Furthermore, Csenge seemed to simultaneously interpret and understand the significance of the information she highlighted. For instance, from *they are the stronger students* she inferred *we can maybe use some supplementary materials*. Or, because she was unsure of the pupils’ prior vocabulary knowledge, she chose elicitation over direct presentation as a more flexible way of providing input.

In contrast, all six beginner/accomplished beginner teachers experienced enormous difficulties in constructing frames around their planning situations. They seemed overwhelmed by the information facing them and were unable to discern what were the key features such as the purposes, the goal state of their situations. As Amélia observed:

> *I always start at the beginning, and at the end of my lesson plan I was bothering and I don't know...what was I do and why.....because when I make at the beginning of the lesson plan, I don't know what I want at the end.* (Amélia, beginner, Interview)

Others echoed similar sentiments. Boglárka (accomplished beginner) explained very clearly she knew how she should plan, starting from *the aims* then *find the most important activities* then *build up the whole lesson, to connect these points* as she did in her Hungarian lesson planning, but could not do this in English planning. She had particular problems establishing goals, commenting:

> *.....but I couldn't...start to plan my lesson because I wanted to know where I would be.* (Boglárka, accomplished beginner, Interview)

Difficulties with the skill of identifying salient information (her goal) constrained Boglárka`s attempts to frame her plan, a skill problematic for all six beginner/accomplished beginner teachers. Moreover Boglárka's comments suggest that while she knew how to frame a Hungarian lesson, a skill developed through her extensive Hungarian teaching experience, she had difficulties transferring this skill to her new field of English teaching.

4.2.1.2.2 Interpreting

Drawing inferences

I described above how Csenge effortlessly drew inferences from the information she highlighted, and this was something all three experienced teachers could do. They also all automatically accurately predicted problems that might occur during teaching and prepared contingency plans to be deployed. Cecília recognised she may not complete her lesson plan and so prepared a simple contingency, that pupils finish extra work at home. She will:

> *....change what I have wrote in my plan and....we'll have time for the picture description but we might not have time for the listening.....They will do it at home – so it's not a problem...we're just doing some practice and at home they will have to sit down and learn.* (Cecília, experienced, Planning Interview)

Through predicting then, she prepared herself to assess and adjust her teaching, with minimum disruption.

In contrast the beginner/accomplished teachers found interpreting their prospective situations hard. On one occasion, Atilla (beginner) asked his 7-year-old pupils to listen to a chant while simultaneously selecting and ordering some pictures. In my field notes I recorded how all pupils *seemed confused* by the task, some did nothing, while some did attempt the activity but unsuccessfully. Eventually, Atilla abandoned the task. He reflected on the incident thus:

> *when I first opened the book and saw what to do, it was a little bit confusing to me. I just saw a lot of pictures and I didn't get the structure.....And I was sure that they are going to have difficulties with....understanding the exercise and with the chant as well....but what*? (Atilla, beginner, Interview)

He himself then had been confused when planning and could not identify *the structure,* that is, the task's key features such as the goals, learning aims, procedures, and could not see any overall pattern that allowed him to make sense of his material. He felt that pupils would have problems, but could not predict what they might be and so could not prepare for them.

Other beginner/accomplished beginner teachers expressed similar problems with interpreting tasks. Amélia described how in principle, she liked to sequence lesson tasks in order of difficulty but because during planning she could not work out *which is easy and which is difficult* (Amélia, beginner, Interview), she made the decisions about sequencing while actually teaching on the basis of her pupils' reactions:

> *So, I have exercises of easier and...more difficult and in the lesson I decide which I use.* (Amélia, beginner, Interview)

Amélia then had difficulties in identifying the salient information needed for effective task analysis such as the purpose of and problems in the materials and this constrained her ability to make sense of tasks. Both Atilla and Amélia maintained that difficulties with "Interpreting" pushed them into solving problems during interactive teaching which is arguably extremely challenging.

All beginner/accomplished beginners had problems with the skill of predicting. Anikó wrote:

> *I think through problems and may be it will be a problem for children too. But every people are different, so they might have other problem what I can't predict. However, I have to solve this problem in the classroom. So it's hard to do.* (Anikó, beginner, Diary)

And Bettina:

> *...it was difficult imagine the anticipatory situations and their solutions* (Bettina, accomplished beginner, Diary)

They all linked problems with predicting to their lack of subject knowledge, or *I haven't got enough practice* (Bettina, accomplished beginner, Diary). Indeed, Bella established links between her subject expertise and ability to predict:

> *....I am afraid of the problems because I don't know will be a problem for children. In Hungarian it's OK because I know it more than the English language. I do the exercises at home and see maybe what problems they will have. But they are little children and sometimes I cannot see.* (Bella, accomplished beginner, Diary)

She linked her new subject (English) with poor predicting skills, and extensive Hungarian experience with good predicting skills which suggests that participants themselves perceived their pedagogic reasoning closely linked to their area of subject expertise.

Principled Approach

Generally speaking, the beginner/accomplished beginners attended far more to surface features and the experienced to the underlying principles of teaching phenomena.

All beginner/accomplished beginners expressed aims a little generally and described the content of the activity rather than the goal they wanted to achieve. Their replies to the interview question: *What's the overall aim of the lesson?* included, *I wanted them to guess something and to do something in their groups* (Bella, accomplished beginner,

Interview); *Teaching this new vocabulary, practise it in speaking and in writing too* (Anikó, beginner, Interview); *to teach some words, expressions and grammar* (Bettina, accomplished beginner, Interview). They all planned around activities, selecting from their textbooks, those they felt would most engage their pupils but the aims of activities sometimes seemed unclear to them. Once, Bettina planned three consecutive games because *it's more fun* (accomplished beginner, Planning Interview). While the games seemed superficially different, they were actually similar and all aimed to help pupils memorize the alphabet so it was uncertain how Bettina's task selection developed learning.

All beginner/accomplished beginners experienced difficulties perceiving the reasons or principles underlying activities, and this caused problems with selecting and sequencing content. Once, Amélia decided to use a storybook to teach grammar and vocabulary to her 11-year-olds. She wanted to incorporate in her teaching a principle recently encountered on her methodology course, that presenting content to pupils in contexts meaningful to them can enhance learning. However, the storybook she selected aimed to teach irregular past tense verb forms but she wanted to teach "was" and "were" plus "illness" vocabulary so it was unclear how the book she selected supported her teaching objectives. Put differently, she could not perceive the principles underlying the materials which caused problems with her selection procedures.

The experienced teachers also planned through activities but could perceive the pedagogic principles underpinning activities to make the lesson purposeful. For example, Csenge described her lesson activities as follows:

> *I will start with a revision……in a crossword or…..I don't know…I find it out somehow. So, then we are going to do listening, for*

general listening first and then the model of the language as a main phase.....There some questions I would like to ask them to answer - we will get to the timetable because this listening is about school, school days, and during the school days, subjects will appear.

(Csenge, experienced, Planning Interview)

Csenge referred to activities through their aims r*evision, general listening....the model of the language* which suggests that she construed the lesson through the teaching/learning objectives in a way not evident with the beginner/accomplished beginner teachers. In other words, the reasoning seemed more principled.

Regarding anticipatory reflection and the skills of "Problem Setting" and "Interpreting", beginner/accomplished beginners reflected in ways almost identical to each other but differently from the experienced teachers. The experienced teachers invested considerable time understanding the planning problem, made sense of situations effectively, automatically drew inferences from information, predicted and prepared for problems in a principled manner. They could construct reliable representations of their planning problem situations to make their task more manageable, an advantage the beginner/accomplished beginners did not share.

The beginner/accomplished beginners proceeded directly onto planning lesson tasks. They had difficulties discerning critical features in their situations (e.g. their goals) which constrained their "Problem Setting" skills. Concerning "Interpreting", they had problems with predicting and generally displayed less insight into situations. Also, their reasoning seemed less principled in that they attended to surface rather than underlying principles which made interpreting, selecting and sequencing content a little hard.

4.2.1.3 Retrospective reflection

Analysis of post-lesson reflection also suggested that the beginner/accomplished beginner teachers reflected in similar ways. I now explore how the participants analysed practice by comparing their problem solving capability and their use of the skill of "Commenting".

4.2.1.3.1 Problem Solving

I suggested earlier that "Problem Solving" underpinned many of the other analytical skills, for instance that participants performed "Predicting" by identifying problems that may occur. In my analysis, I could identify what I term bounded "Problem Solving" episodes when, in performing a skill, participants worked through some, or all of the problem solving processes of: identifying the problem, identifying its cause, identifying solutions, evaluation of the episode. To gain insight into participants' problem solving capability, I examined how they worked through these processes when exploring practice.

I next compare three "Problem Solving" episodes, one each from a beginner, accomplished beginner and an experienced teacher to determine whether differences existed in their performance. My comparison is structured through three aspects: the number of problem solving processes covered, the accuracy, the depth of participants' performances.

<u>Beginner teacher (Amélia)</u>

Amélia aimed to teach third person present simple through the context of jobs to her 10-year-old pupils. In the lesson pupils consistently made mistakes such as *I wears a*

uniform...He wear a uniform...She wear a uniforms. When evaluating the pupils' performance Amélia commented:

> *I think they don't understand every words that "works in a uniform"...not "wears in a uniform". Maybe don't the form was the problem just the meaning of the words (*Identifying problem 1*). But somebody change it so they don't know that the boy is "he" and the girl is "she"* (Identifying problem 2*). I tried to help them to show the picture that he hasn't a...ponytail* (Identifying solution)*.....but I don't know what was the problem with "he" or "she".*
>
> *(*Amelia, beginner, Interview)

Amélia worked through two problem solving processes of identifying a problem and identifying a solution. Indeed, she identified two problems. Problem 1 concerned concept when pupils *don't understand every words* and Problem 2 concerned form when pupils were confused by "he/she" pronouns. This suggests that Amélia was unsure in identifying the precise problem. The problem was actually grammatical as pupils were confused by the "s" verb-ending (*I wears)* and "he/she/it" pronouns, a common problem with Hungarians because Hungarian uses just one pronoun for "he/she/it".

Amélia's solution of showing a picture of a boy referred neither to the problem nor its cause both of which were grammatical in nature and required a solution that helped pupils notice the "s" verb-ending. Amélia misinterpreted the problem, could not see the underlying cause and consequently identified an inappropriate solution.

Several beginner/accomplished beginner teachers mentioned difficulties with identifying the exact problem. Atilla bluntly stated *we cannot really see our mistakes*

(beginner, Interview), and Bettina that while she often knew something was wrong, she could not recognise exactly what, *I often think it's no good...I...feel it* (accomplished beginner, Interview).

Accomplished beginner (Bella)

Bella aimed to teach a restaurant dialogue to 12-year-olds. In the lesson, pupils were inattentive and disruptive and Bella evaluated her own performance thus:

> *Sometimes they talk when they had to listen to me* (Identifying problem).....*I didn't want to look like a witch but I think after that I will....tell them that..."What I promise badly or good, I always keep it. So, please be quiet and if you don't then I will write a notice into your book"* (Identifying solution). (Bella, accomplished beginner, Interview)

Bella accurately recognised the problem that pupils misbehaved, and suggested a solution that did refer to the problem, of punishing the miscreants. She did not however, consider the cause of the pupils' misbehaviour or evaluate the "Problem Solving" episode. This suggests that she focused on the problem's surface features rather than its underlying structure, creating the impression that her analysis lacked depth.

Experienced (Csenge)

Csenge did a reading task with her 12-year-olds and as a pre-reading activity, pupils in groups had to construct from word cards, sentences related to the text. Pupils found this extremely challenging and Csenge evaluated their performance thus:

> *They have the small cards and they were mixed, there was a pattern and they could not find the place* (Identifying problem)*...I gave them*

some help and I think that they could solve the problem then (Identifying in-class solution).

She continued that pupils did not know:

> *the strategy where to start with and how to work with this pattern* (Identifying cause)...*In previous lessons, I should've tried some patterns* (Identifying solution)...*it comes from history and we have to learn it..it takes time* (Evaluation). (Csenge, experienced, Interview)

NB: "*it comes from history*" means that Hungarian education does not foster the strategic thinking skills needed for such problem solving tasks.

Regarding number, accuracy and depth of processes, Csenge worked through all four problem solving processes. In particular, the solution of training in strategic thinking, referred to the problem's cause, that pupils lack problem solving skills. Moreover, she added insight into the whole episode with "Evaluation", and highlighted a constraint to her solution, that Hungarian pupils need time to learn problem solving skills. Csenge then seemed to approach "Problem Solving" in a more thorough, principled and critically aware manner than both Amélia and Bella. First, by working through more problem solving processes, she automatically considered more aspects of the situation suggesting a more thorough approach. Secondly, she clearly perceived the problem through its cause suggesting a principled, in-depth analysis whereas neither Amélia nor Bella addressed the cause but attended more to surface features in their situations. Thirdly, Csenge's evaluation of the episode suggests she was more critically aware than Amélia and Bella who omitted this process.

One significant feature to emerge from this comparison is not that Csenge solved problems more effectively, but that Bella (accomplished beginner) despite her twenty-three year experience of teaching Hungarian behaved in ways similar to Amélia, a complete beginner. Bella did not consider, for example, possible explanations for her pupils' misbehaviour that I believe were available to her: that the lesson was at the end of the day, a visitor (me) was present, the materials were perhaps too easy, hard, uninteresting, and irrelevant to pupils' needs all of which could have impacted on pupils' learning. Put differently, Bella did not use knowledge developed from her Hungarian teaching experience to help herself reflect on her English lesson and this lack of knowledge transfer was also evident with other accomplished beginners.

Once, for example Boglárka taught a song to her 7-year-olds. The pupils could not master two of the lines and Boglárka and the pupils repeatedly sang the song but to no avail and it was eventually abandoned. When asked how she would have responded in a Hungarian music lesson, Boglárka replied she would have isolated then practised the two problematic lines before reintegrating them into the whole. She could not explain why she did not use this strategy in her English lesson, even though the class was the same.

All other beginner and accomplished beginner teachers were less thorough, principled and critically aware when problem solving. Table 4.2 records problem solving processes used by participants when solving teaching problems (Appendix 6 contains the full version). In compiling the Table 4.2, I identified for each teacher individual "Problem Solving" episodes in Interviews 1 and 2 and tallied on a simple chart the processes the teachers covered within each episode.

Table 4.2 Processes of Problem Solving

		Identify Problem	Identify cause	Identify solution	Evaluation
Beginner	Interview 1	1			1
		1			
(Amélia)		*1		1	
	Interview 2	1		1	1
Accomplish-	Interview 1	1	1		
ed Beginner		1			1
		1	1	1	
(Bella)	Interview 2	*1		1	
Experienced	Interview 1	*3	3	3	3
		1		1	
(Csenge)	Interview 2				

In Table 4.2, each row signifies one "Problem Solving" episode and the numbers indicate the process completed by the participant. Amélia dealt with three problem solving episodes in Interview 1 and one in Interview 2. The asterisk (*) indicates that the example illustrating this episode appears on page 133 in which she identified a problem and a solution. Bella dealt with three episodes in Interview 1 and one in Interview 2 and Csenge, four episodes in Interview 1 three of which covered all four processes. The asterisks indicate the examples for these episodes appear on pages 134-135

Table 4.2 and the full version in Appendix 6 reveal that the beginner/accomplished beginners worked through fewer problem solving processes and considered causes and evaluation far less frequently than the experienced teachers who in fact almost always

worked through all four processes. This implies that when solving problems, the beginner/accomplished beginners were less critically aware, less thorough and less principled than the experienced teachers.

4.2.1.3.2 Commenting

"Commenting" refers to how teachers achieved a complex way of speaking through giving opinions, examples and observations. I next compare three interview extracts, one each from a beginner, an accomplished beginner and an experienced teacher to illustrate differences in the complexity of these teachers' reflections and the role of "Commenting" in their articulations.

Extracts are from the start of Interview 1, interaction was prompted by *How do you feel it went?* First, I present the extracts and then compare the skills teachers used.

Beginner teacher (Atilla)

Atilla *I think it was very good because I did everything I planned and I enjoyed working with the kids. And as I saw, they enjoyed working with me, too.* (Evaluating/lesson)

Int. *Right....and...the overall aim?*

Atilla *And.....I didn't spend too much time on the preparation. Actually I just.....you know the Teacher's Book...to the Playway...they are perfect, excellent and with that, very few preparation is needed (Describing/planning) because everything is...clear. I've got the picture cards, the story cards, the video, I've got cassette. You know we've got story cards....it has got numbers so there are numbers and I show the cards and....it has got hints in sheets on the back of them*

(Describing/materials), *so I don't have to learn the poems or stories by heart. So it's quite good. I like it.* (Evaluating/materials)

Int. *OK. Good. What was the most important thing in the lesson for you?*

Atilla *The most important thing is to...children to have fun* (Commenting: Opinion).

Int. *Is there one incident that made you really happy in the lesson?*

Atilla *I don't really know because I was enjoying the lesson from the beginning to the end. But....I was a little bit upset with Zoli because he's a problematic kid.* (Describing/feelings)

Accomplished beginner (Boglárka)

Bogi *I feel it was good because I wanted to do different kinds of task to practise what we learnt.* (Evaluating/lesson) *And...I wanted to teach new grammar "Yes, I do, No, I don't." question and answer form and short form* (Describing/aim). *And I hoped it worked.*

Int. *What was the overall aim of the lesson?*

Bogi *....revision, mostly revision and there was a new thing as I mentioned* (Describing/aim).

Int. *Why did you teach the new thing?*

Bogi *Because there was in our syllabus....and I wanted to show you how I can teach a new grammar...that was the other reason* (Pedagogic Reasoning: Simple).

Int. *What was the most important thing in the lesson for you?*

Bogi *I think for me...maybe every pupil tried to work....*(Commenting: Opinion)*...because I have some pupils, mainly Jennifer who...She's*

sitting in the first...next to Anna...She has some difficulties. (Describing/pupil)

Experienced teacher (Csilla)

Csilla *We started with general questions* (Describing/task) *and after the weekend it's quite good and it's quite difficult for them to acclimatize and it helps to start English* (Commenting: Opinion)*...then came the hangman game...the letters on the board game* (Describing/task) *and although we do it quite often, I don't...didn't mind it* (Commenting: Opinion)*, because spelling is quite difficult sometimes for them* (Pedagogic Reasoning: Simple) *and even in this year 5 they mix up "I"..."E" and these kinds of letters and how to pronounce it* (Commenting: Elaborating)*...this is one good way how to start the lesson and how to give the topic we'll talk about afterwards because later on we wanted to do some kind of shopping practice, that is why I chose a souvenir shop also because it was a way how to connect a shopping conversation with a postcard writing* (Pedagogic Reasoning: Intermediate)*. Then I didn't know exactly what vocabulary they knew or* ***not*** *because I didn't teach them last year and...*(Predicting)*...I elicited their knowledge.....*

On first impressions Atilla and Boglárka seemed to analyse their lessons in a simpler, more descriptive manner than Csilla. It is helpful to represent the pattern of skills used by the teachers in deconstructing their practice to identify what may account for these differences.

- *Atilla (Beginner)*

Evaluating – Describing – Describing – Evaluating – Commenting: Opinion – Describing

- *Boglárka (Accomplished beginner)*

Evaluating – Describing – Describing – Pedagogic Reasoning: Simple – Commenting: Opinion – Describing

- *Csilla (Experienced)*

Describing – Commenting: Opinion – Describing – Commenting: Opinion - Pedagogic Reasoning: Simple – Commenting: Elaborating – Pedagogic Reasoning: Intermediate – Predicting

Three interrelated features may explain the more analytical, informative nature of Csilla's reflections. First Csilla used a wider range of skills when deconstructing experience than both Atilla and Boglárka. Second, Csilla used more analytical than descriptive skills, using six analytical and two descriptive skills to Atilla's and Boglárka's three analytical and three descriptive skills. The third feature is Csilla's more frequent use of "Commenting".

What Csilla actually said when "Commenting" was not particularly sophisticated, but was used to link together individual statements into longer reasoning chains. This made her commentary more cohesive and complex in a way that allowed for more inferential reasoning. For instance, she described the first task *general questions* (Describing) then gave an opinion on this, inferring that adjusting to English takes time *it's quite good and it's difficult to acclimatize* (Commenting: Opinion). Then she described the

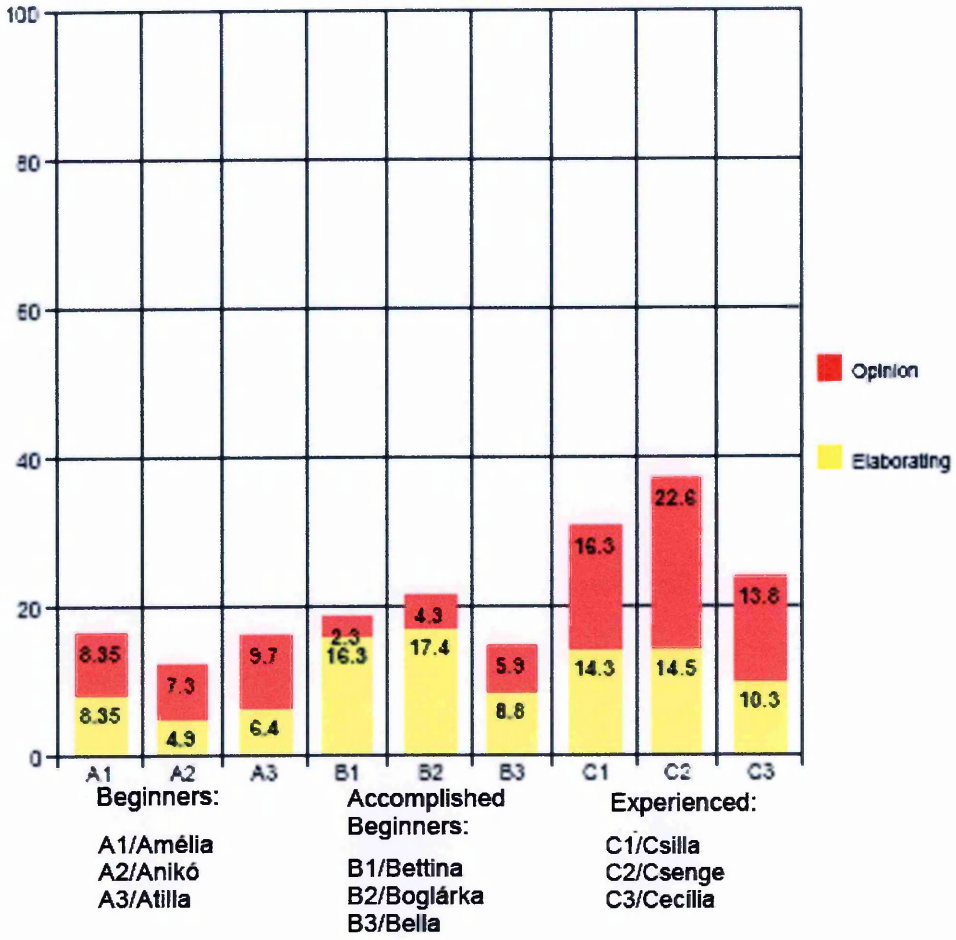
hangman game (Describing) which triggered an opinion *we do it often....I didn't mind it* (Commenting: Opinion) which triggered a justification for this opinion *spelling is quite difficult* for Hungarians (Pedagogic Reasoning), information she then related back to her own class *they mix up 'I', 'E'* (Commenting: Elaborating). And so it continues.

In contrast, Atilla and Boglárka hardly ever used "Commenting". Their talk tended to consist of unconnected individual statements about phenomenon. This plus the fact that they used a narrower range of more descriptive skills to process information may help account for the simpler, more descriptive nature of their analysis.

These differences between the reflections of the experienced and the beginner/accomplished beginner teachers were also apparent with all other participants. In particular, "Commenting" was used more frequently by the three experienced teachers. Figure 4.3 represents how often participants used "Commenting" as a proportion of their total skill use when reflecting on their lessons in Interviews 1 and 2. Percentages were obtained as described on page 112. In Fig. 4.3 the horizontal axis represents the nine participants. The bars indicate as a percentage the proportion of total skill use that was devoted to "Commenting". The colour red represents giving an opinion and yellow elaborating a statement through examples, extra details and observations. When Atilla (A3) in Interview 1, discussed the lesson events, 16.1% of his total skill use involved "Commenting" of which 9.7% consisted of giving an opinion and 6.4% elaborating a statement. Hence 16.1% of Atilla's contributions involved embellishing talk to make it more informative.

Figure 4.3 Frequency of use of "Commenting"

Interview 1



Interview 2

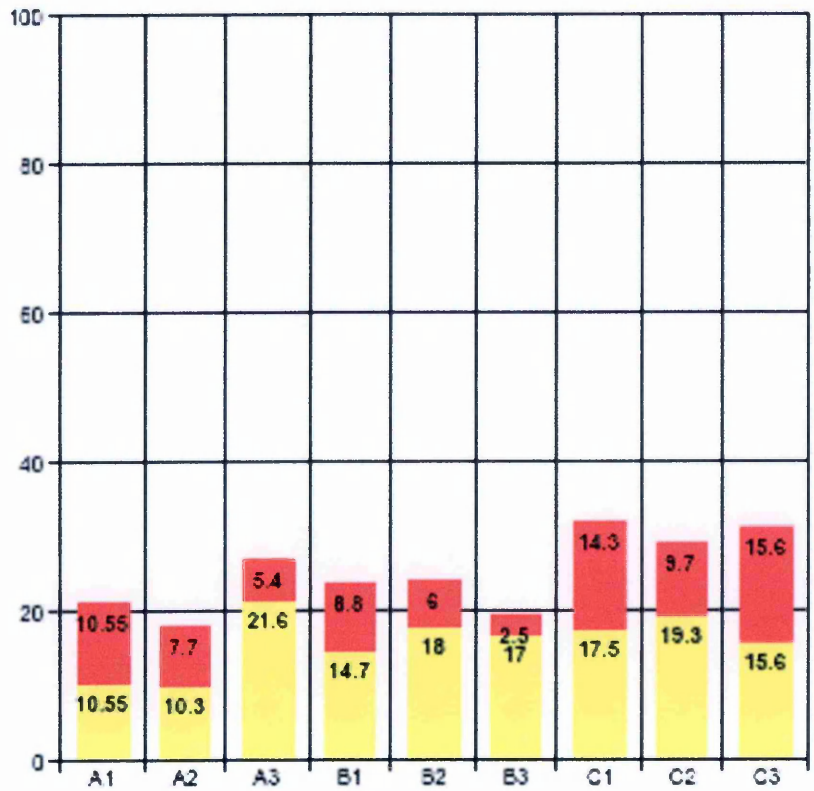


Figure 4.3 indicates that the beginner/accomplished beginner teachers used "Commenting" proportionally less frequently than the experienced teachers, particularly in Interview 1. This may suggest when analysing their lessons, they embellished their statements less often than the experienced teachers and may help explain why their reflections appear less complex. Figure 4.3 also shows that all beginner/accomplished beginner teachers increased their proportional use of "Commenting" in Interview 2, suggesting that they began to think and speak in more complex ways. The development of reflective thinking is dealt with in the next section.

One feature Fig. 4.3 highlights, and one I initially missed through qualitative analysis, concerns how the accomplished beginners, while they used "Commenting" at relatively comparable levels to the beginner teachers, gave fewer opinions than both beginner and experienced teachers, especially in Interview 1. Upon re-examining my data, I found I had actually recorded elsewhere a reluctance of the accomplished beginners to express opinions. For example, I had noted in my research diary that their responses did not always match my interview questions. When I asked Bella and Bettina, *How do you feel it went?* they both sidestepped the need to express an opinion. Bella answered my question with a question:

> *I'm curious...what your opinion....is about learning grammar in this way....that I try to drill the form of....the past continuous.* (Bella, accomplished beginner, Interview)

And Bettina communicated her teaching principles using terminology from her methodology course rather than evaluating her lesson:

> *The key words were.....repetition and meaningful context. I tried to do a real situation. For example, "Here's my....school bag..." and I*

tried to arise children's interest. (Bettina, accomplished beginner, Interview)

The post-lesson discussions encouraged participants to explore their own experiences and the beginner and experienced teachers seemed fairly comfortable with this. The beginners encountered such interaction on their English TP and methodology programmes and the experienced teachers were generally at ease learning from their practice. However the reluctance of the accomplished beginners to give opinions may relate to their previous experience of post-lesson discussions, of the authoritarian type described in Chapter One.

They all expressed some discomfort with our discussions and in various diary entries wrote, *everything was new for me, the questions, the situation* (Bettina) and another, *I have never done this kind of talking in English yet* (Boglárka) and *I have never done this post-lesson before. It is hard to say why I do something* (Bella). This may illustrate how the socio-cultural context influences teachers' reflective capability and that the rather traditional Hungarian education system may not be conducive to principles of reflective practice. This in turn implies that learners from such backgrounds may need very explicit input in what exploring one's practice actually entails and structured guidance on how to accomplish this, before they can be expected to reflect.

To conclude, three arguments have been presented to support Finding 1, that beginner/accomplished beginner teachers reflected in similar ways but differently from experienced teachers. First, the rather traditional beliefs about education of beginner/accomplished beginners were similar to each other but different from the experienced teachers. Second, the beginner/accomplished beginner teachers experienced

similar difficulties with anticipatory reflective skills of "Problem Setting" and "Interpreting" which constrained their efforts to represent, frame, analyse and interpret their prospective teaching contexts. Third, the beginner/accomplished beginner teachers' use of "Problem Solving" and "Commenting" suggested they reflected post-lesson in more simple, less analytical ways than the experienced teachers who were generally more thorough, principled, critically aware and articulate.

4.2.2 Finding 2

Reflective capacity developed between post-lesson Interviews 1 and 2 for beginner/accomplished beginner teachers

Evidence to support Finding 2 is drawn from a comparison of how beginner/accomplished beginner teachers performed key cognitive skills in post-lesson Interviews 1 and 2. I gradually became aware that all beginner/accomplished beginners seemed to reflect more effectively in Interview 2 but was initially unaware of how. So I compared the cognitive skills teachers used to deconstruct their experiences to gain insight into what that development consisted of.

It would be naive to claim unequivocally that development had occurred, because the complex nature of reflection makes it a difficult skill to measure. Several indicators though when taken together, do suggest that participants processed information in Interview 2 in a more analytical, complex manner than Interview 1. I focus first on development in the skill of "Commenting", then "Pedagogic Reasoning", then "Evaluating" and finally their overall use of analytical skills.

It is worth noting that four of the six beginner/accomplished beginner teachers had very little actual teaching experience between Interviews 1 and 2. One accomplished beginner taught just three hours of English, another taught six hours. Two beginner teachers did not teach at all between Interviews 1 and 2. These participants then had limited opportunity to develop reflective skills by actually reflecting on practice but despite this, seemed to develop their reflective capability.

4.2.2.1 Commenting

A comparison of the pattern of skills that one teacher Atilla (beginner) used in Interviews 1 and 2 plus his use of "Commenting" suggests changes in the complexity of his reflections.

"Pattern of skills 1" represents the combination of skills used in the extract from Interview 1 "Beginner teacher (Atilla)" (page 138). "Pattern of skills 2" represents the Interview 2 extract below. In both extracts, interaction was initiated by *How do you feel it went?*

Pattern of Skills 1

Evaluating – Describing – Describing – Evaluating – Commenting: Opinion – Describing

Pattern of skills 2

Describing – Evaluating – Describing – Commenting: Opinion – Pedagogic Reasoning: Simple – Pedagogic Reasoning: Intermediate – Commenting: Elaborating – Describing – Commenting: Elaborating

Beginner teacher (Atilla): Interview 2

Atilla *I really liked it....I always enjoy working with kids* (Describing/ feelings). *The feely quiz was a very good idea to start with....it's interesting and it was a good way to introduce the topic as well* (Evaluating/task). *And after this there was a main phase. The pre-stage I had to pre-teach the key vocabulary* (Describing/aim) *which is quite easy* (Commenting: Opinion). *These words are...they are meaningful context, they are very easy to learn and understand for the kids. And I think that's the reason they picked them up so easily* (Pedagogic Reasoning: Simple).

Int. *You said "Not squeak, squeak, 'mouse' but 'mouth'." Why?*

Atilla *'Cos sometimes they have difficulties memorising words...to pronounce and that's an easy way...we can link it to something they already know* (Pedagogic Reasoning: Intermediate)...*I did this too with cake – we have a word in Hungarian "kék" and....it's quite the same..."cake"-"kék"...and after that they didn't have problems saying the words.* (Commenting: Elaborating)

Int. .....*Carry on*

Atilla *So, I presented the action story. First they didn't have to do anything, just listened to it.....it was a process for them...from the easier to harder, from the concrete to the abstract* (Describing/task). *For example, they had...aids - that's more concrete for them.....and if they don't have anything which help them, it's a little more abstract* (Commenting: Elaborating).

Atilla's reflections appear more analytical and sophisticated in Interview 2. He used a wider range of skills to process information than in Interview 1, including more analytical skills. "Commenting" was also used more often which enabled Atilla to embellish his talk through examples and opinions. Interestingly, Atilla started to use "Commenting" to link individual statements into longer chains of reasoning in the manner of the experienced teachers. He described his aim *pre-teach the key vocabulary* (Describing) expressed an opinion *which is quite easy* (Commenting) which triggered a justification, that the words are in a m*eaningful context...that's the reason they picked them up so easily* (Pedagogic Reasoning: Simple). Although "Commenting" linked up just three individual statements, it may indicate that Atilla was starting to create more complex patterns of information.

To recall, all beginner/accomplished beginner teachers increased their use of "Commenting" in Interview 2 which may suggest a development in the complexity of their reflections.

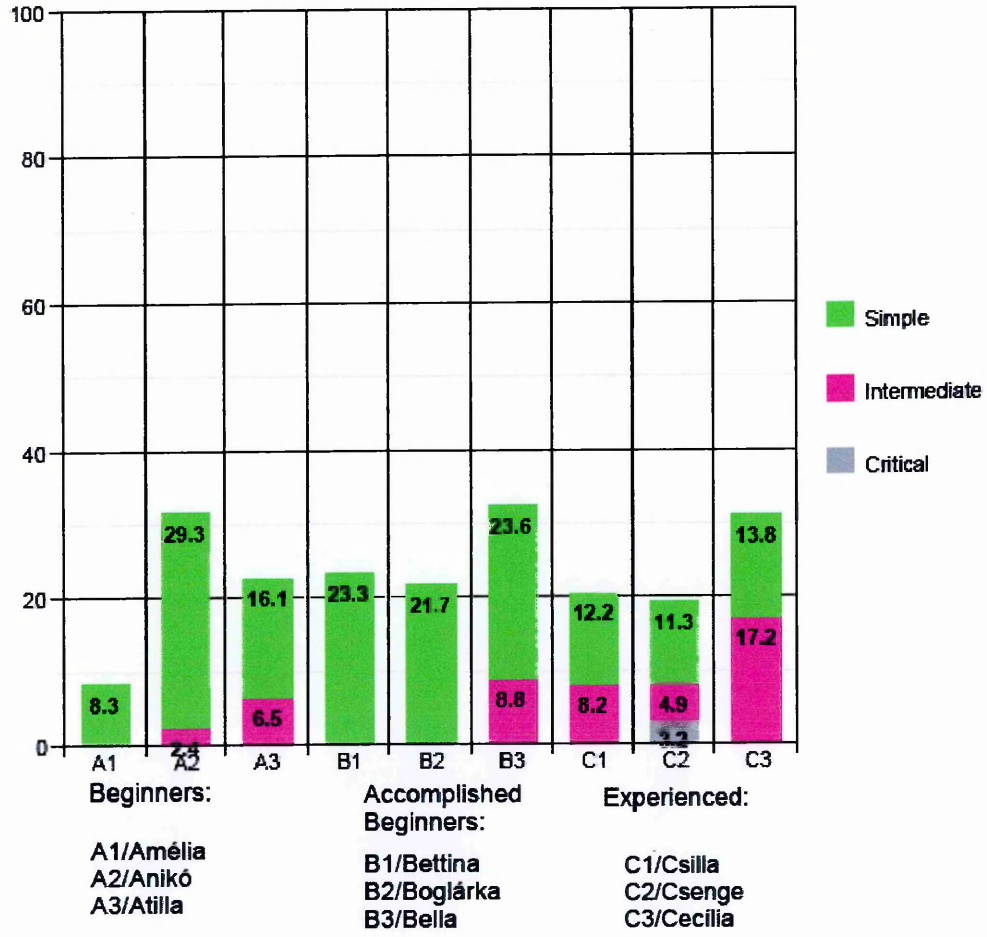
4.2.2.2 Pedagogic Reasoning

Quantitative analysis indicated that qualitative changes occurred in the "Pedagogic Reasoning" of beginner/accomplished beginners in Interviews 1 and 2. "Pedagogic Reasoning" focused on the sources of knowledge teachers used to explain teaching events and was divided into levels of "Simple" where teachers drew on personal experience or opinion to explain events, "Intermediate" drawing on more exploratory reasons including those from pedagogy and "Critical" referring to social-cultural features. Figure 4.4 represents how often participants used "Pedagogic Reasoning" as a proportion of their total skill use when reflecting on lessons.

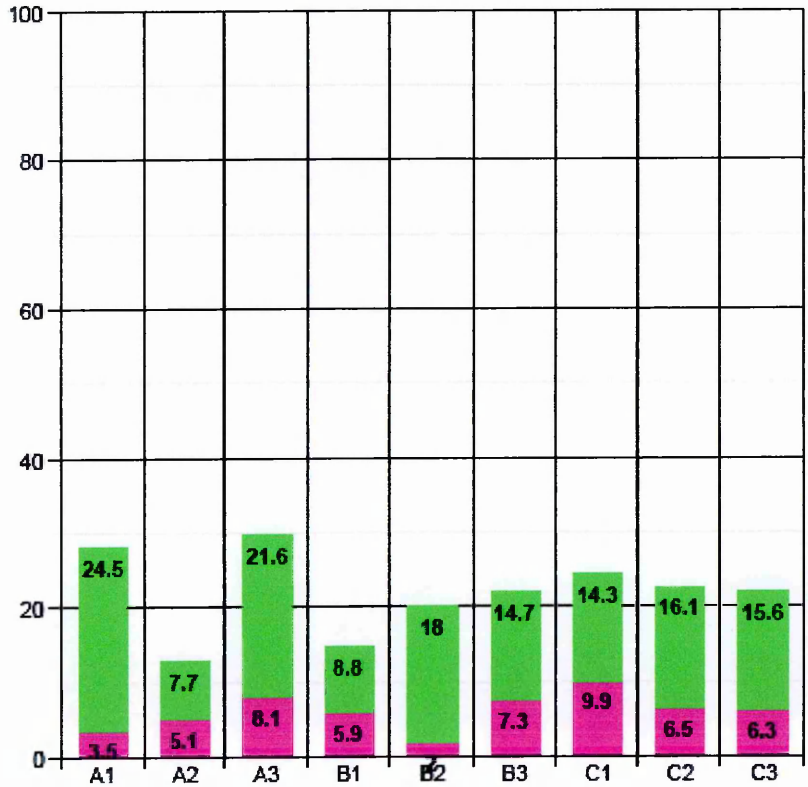
The horizontal axis represents the nine participants, the bars indicate as a percentage the proportion of total skill use that was devoted to "Pedagogic Reasoning". Thus, when Bettina (B1) in Interview 2, discussed her lesson, 14.7% of her contributions involved the skill of "Pedagogic Reasoning". Of this, 8.8% occurred at the level of "Simple" reasoning (*we sang a song and said a rhyme because I like say a rhyme and singing*) and 5.9% at "Intermediate" level, when she justified practising the alphabet through a chant: *The rhythm is good for this....the memory aids and...that...confirm the letters.* Although expressed in simple English, she referred to something she had recently encountered on her methodology course, that rhyme, rhythm and tune are memory aids.

Figure 4.4 Frequency of use of "Pedagogic Reasoning"

Interview 1



Interview 2



The feature to highlight from Fig 4.4 is not that participants used "Pedagogic Reasoning" proportionally more often in Interview 2, indeed this was not always the case. However, nearly all beginner/accomplished beginners increased their use of "Pedagogic Reasoning" at Intermediate level in Interview 2, a feature I initially missed through qualitative analysis. This may imply they were starting to think about teaching in more complex ways, using ideas drawn from pedagogy. Put differently, they were starting to link what they knew about pedagogy to their actions in the classroom and so develop deeper understandings of their teaching.

4.2.2.3 Evaluating

The graph "Frequency of Use of Evaluating" is contained in Appendix 7 and indicates that nearly all beginner and accomplished beginners increased their use of "Evaluating" as a proportion of total skill use in Interview 2. This implies teachers were starting to examine more closely the value of their lessons, to think more critically about their work.

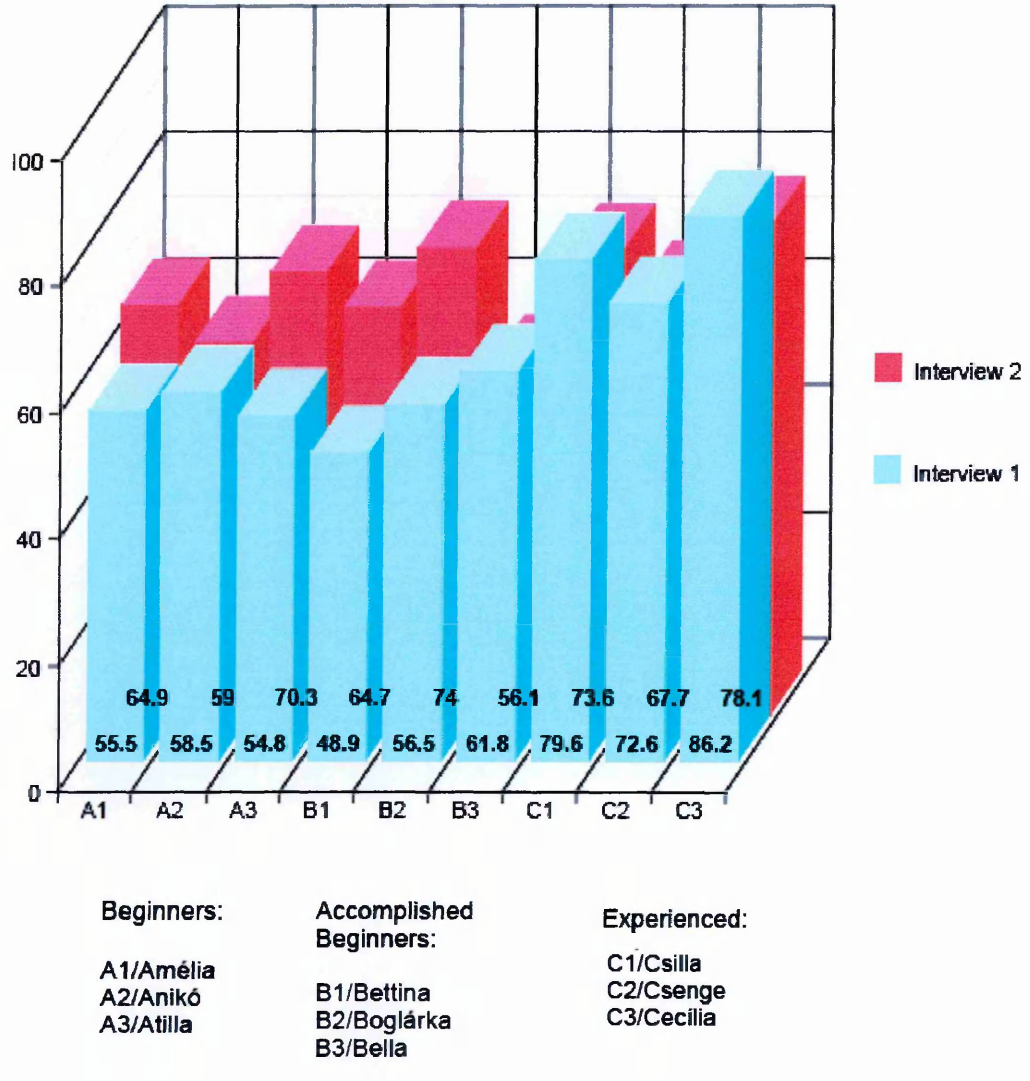
4.2.2.4 Analytical versus descriptive approach

Quantitative analysis suggested nearly all beginner/accomplished beginner teachers developed a more analytical approach in their reflections in Interview 2. Figure 4.5 represents how often participants used analytical skills as opposed to descriptive skills, as a proportion of total skill use. Use of analytical skills for Interview 1 is represented by the nine blue bars and their percentages by the lower row of numbers. For Interview 2, frequency of use is represented by the nine red bars and percentages by the upper row of numbers. To obtain one percentage for each participant's analytical skill use, I added together the individual percentages for their analytical skills as recorded on Tally Tables 1 and 2 (Appendix 5). Thus for Bettina (B1) the percentage 48.9% for Interview 1

consists of 23.3% for "Pedagogic Reasoning" plus 18.6% for "Commenting" plus 7% for "Evaluating". The remaining 51.1% of all Bettina's contributions therefore involved "Describing".

When Bettina (B1) discussed her lesson in Interview 1, 48.9% of all her contributions used analytical skills and this increased to 64.7% in Interview 2. This may suggest her lesson reflections became more analytical in nature in Interview 2.

Figure 4.5 Frequency of use of analytical skills



Beginners:	Accomplished Beginners:	Experienced:
A1/Amélia		C1/Csilla
A2/Anikó	B1/Bettina	C2/Csenge
A3/Atilla	B2/Boglárka	C3/Cecilia
	B3/Bella	

Fig. 4.5 indicates that nearly all beginner/accomplished beginners developed a more analytical approach in Interview 2 as indicated by their increased use of analytical skills (and so a corresponding decrease in "Describing"). Fig. 4.5 also indicates that experienced teachers used a high percentage of analytical skills in both Interviews 1 and 2, suggesting that from the study's outset, their lesson reflections were already more analytical than descriptive. Although the experienced teachers used proportionally slightly fewer analytical skills in Interview 2, this variation is rather small.

It is difficult to assert unequivocally that the beginner/accomplished beginners reflective capability developed between Interviews 1 and 2. But, I believe several indicators taken together, do suggest that they were starting to reflect in a more analytical, informative, complex manner in Interview 2. First, when reflecting on individual lesson events in Interview 2, they used a wider range of skills than in Interview 1 and increased their use of "Commenting". Also, most beginner/accomplished beginners increased their use of "Pedagogic Reasoning" at Intermediate level in Interview 2, implying they were drawing on a wider range of knowledge sources to support their reasoning. They also increased their overall use of analytical skills such as "Evaluating" and correspondingly decreased their use of "Describing". The performance of the experienced teachers between Interviews 1 and 2 was fairly consistent with just some small variation which perhaps suggests their reflective capability was more stable from the study's outset.

To recap, all the beginner/accomplished beginner teachers had limited opportunity to develop reflective skills by actually reflecting on practice. This implies some aspect of the research process actively promoted reflective capability and this is what I turn to next.

4.2.3 Finding 3

Co-planning proved an effective point of intervention for developing reflective capability

I first establish why co-planning emerged as a useful point of intervention and then present participants' characterisations of co-planning. After that, how participants perceived their own reflective skill development is presented. The section concludes with a discussion of how co-planning may have fostered reflection.

4.2.3.1 Co-planning: a useful point of intervention

There were three main activities in my study that could have potentially fostered the reflective capability of the beginner/accomplished beginner teachers: diary writing, co-planning discussions, post-lesson discussions. From these activities, all beginner/accomplished beginners identified co-planning as a critical source of learning.

Information on learning sources was elicited through three questions posed at various times during interviews and diary writing and Table 4.6 "Sources of Learning" summarizes participants' responses to these questions. Questions 1 and 2 focused on the sources of teacher learning, Question 3 asked teachers to compare pre and post-lesson discussions.

Table 4.6 Sources of Learning

1) Where do you learn about teaching?			
Participants' Suggestions	**Beg.**	**Acc. Beg.**	**Exp.**
Using course books	3	3	3
Role playing lessons at home	3	3	

Teaching + post-lesson discussion	1	1	3
Observing experienced teachers'	1	1	3
Attending methodology course		3	
Attending workshops/conferences (e.g. IATEFL, British Council)			3
Pupil feedback			3
Reading UK resource books			3
Using Hungarian teaching experience		1	

2) What can help beginner teachers learn about teaching?			
Participants' suggestions	**Beg.**	**Acc. Beg.**	**Exp.**
Co-planning discussions	3	3	3
Working with experienced teachers	1		3
Teaching + post-lesson discussion			3
Teaching without post-lesson discussion	2	1	
Observing experienced teachers'			3
Attending workshops/conferences			3
Reading UK resource books			3

3) Which was the most useful / interesting / difficult? Co-planning (CP) or post-lesson (PL) discussion?

	Beg.		**Acc. Beg.**		**Exp.**	
	CP	**PL**	**CP**	**PL**	**CP**	**PL**
Useful	3		3	1	3	3
Interesting	3		3			3
Difficult	3		3	1		3

In Questions 1 and 2, the column "Participants' Suggestions" records the ideas that participants proposed and "Beg.", "Acc. Beg.", "Exp." how many individuals proposed a particular idea. Thus for Question 1, all nine participants suggested that using course books supported their teacher learning.

Table 4.6 clearly reveals the popularity of co-planning. In Question 2, all participants suggested co-planning as helpful to beginner teachers. In Question 3, all beginner/accomplished beginner teachers identified co-planning as more useful, interesting and difficult than post-lesson discussions. Interestingly, what teachers valued as sources of learning related closely to the level of experience that they possessed. All experienced teachers learnt from both formal sources (e.g. attending conferences) and from their own practice (e.g. teaching with post-lesson discussion). Answers to Question 2 indicate that the experienced teachers also believed these sources to be the most valuable for inexperienced teachers but the beginner/accomplished beginners did not share this view.

The beginner/accomplished beginners seemed to value more prescriptive sources of learning that offered very structured support over those that promoted learning by exploring practice. In Question 1, they mentioned course books with their ready-made lesson plans and rehearsing lessons at home. In Question 3 they mentioned co-planning. Few beginner/accomplished beginners identified as helpful the activities currently provided on their English methodology programmes such as writing TP journals, teaching with post-lesson discussion, research projects, peer teaching. Diary writing and post-lesson discussions in particular are activities recognised for their potential to develop teacher learning through self-exploration but were not recognised as useful by these teachers.

Diary writing may not be seen as helpful due to attitudes shaped by participants' experiences of writing their TP journals. At my institution, all trainees routinely keep TP journals, but it is an unpopular activity, seen as time-consuming, a compulsory assessed course component rather than a mechanism for self-growth. Certainly, my participants' diary entries tended to be non-reflective and brief rather than an in-depth analysis of practice.

Traditionally, it is believed that post-lesson discussions help teachers develop their practical knowledge by discussing and solving teaching problems after they have occurred. However, my findings have suggested that the beginner/accomplished beginner teachers experienced great difficulties with the skill of problem solving which may have constrained their ability to learn by analysing their own practice. Conceivably, co-planning provided the very structured support that Hungarian beginner teachers need to develop the skills that enable them to learn effectively from practice. This is why the beginner/accomplished beginner teachers preferred co-planning as a learning mechanism over both post-lesson talk and diary writing.

4.2.3.2 Participants' perceptions of co-planning

Co-planning refers to jointly planning lessons with participants and took the form of conversations about what the teachers wanted to teach. Participants characterized co-planning talk as analytical, involving problem solving and a questioning style that elicited their reasons underpinning their thoughts and actions. Sometimes the interaction was exploratory and collaborative, at other times more directive when I provided input on pedagogy, information on the teaching context, or demonstrated various practical pedagogic or thinking skills.

All three experienced teachers (but not the beginner/accomplished beginners) commented how co-planning interaction pushed them into thinking about their own cognitive activity, that it prompted metacognitive processing:

> *when we did this planning together so some of your questions make me think.....you asked me 'Which one would you leave out?'.....and then I told myself to think again 'Oh, is this OK?...Perhaps I should change something'....Somehow made me rethink.* (Cecília, experienced, Interview)

Co-planning interaction then, was characterised as involving problem solving, questioning, reasoning, something that combined collaboration with instruction and prompted metacognitive processing.

I next summarise participants opinions collected from interview and diary data, on how they themselves perceived their reflective capability to have developed.

4.2.3.3 Development of reflective skills

4.2.3.3.1 Experienced teachers

The only aspect mentioned by experienced teachers concerning the development of reflective capability was they had developed a more conscious mode of thought and were less intuitive about their teaching decisions. This was achieved through the probing nature of interaction in both pre and post-lesson discussions which pushed them to articulate their reasoning underpinning actions and examine their practical knowledge leading to new understandings. Csilla commented:

you asked questions and with these questions I concentrated on certain parts of my lesson and I thought over these points again. (Csilla, experienced, Interview)

And Cecília:

I have to be more conscious of what I'm doing and why I'm...doing it...It made me rethink....It breaks the routine. (Cecília, experienced, Interview)

4.2.3.3.2 Beginner/accomplished beginner teachers

The beginner/accomplished beginners mentioned various areas of development which I have summarised under headings of "Problem Setting", "Interpreting" and "Pedagogic Reasoning". For these teachers, development was achieved predominantly through co-planning.

Problem Setting

Most beginner/accomplished beginner teachers emphasized development in "Problem Setting". Amélia observed her thinking had become more coherent, *I know what I want, I can make the whole lesson.* She continued that previously, *I don't know where I put the main aim. Maybe I put in the follow up. So it was difficult for me. But now I know.* (Amélia, beginner, Interview)

Anikó wrote that she thought in a more principled manner:

I learned that I have to know the purposes, what I want to achieve at the end of the lesson. (Anikó, beginner, Diary)

And Bettina that her thinking was more interconnected:

> *I have to keep it my mind my main aim, what is the main aim of the lesson too and every task have to be subsumed under main aim.* (Bettina, accomplished beginner, Diary)

They also learnt how to frame their teaching situations more effectively and could for example, identify their goals and the steps needed to achieve them. Some teachers suggested they could better interpret phenomenon in post-lesson discussions as a result of developing framing skills during co-planning. Bella claimed her clarity of perception had improved, that she could *see more clearly the materials and the problems in the lessons* (Bella, accomplished beginner, Diary). Boglárka observed her thinking had become more coherent and principled so she could see relationships between concepts and procedures more clearly:

> *It was....the most useful to learn something about building the lesson.....I think I can see some connection between aims, stages...how I can get the aims...what do I have to do the lesson...what I want to do...and...how to do....and it's clearer for me when we talking in past too.* (Boglárka, accomplished beginner, Interview)

N.B. *talking in past* means post-lesson discussions.

Interpreting

Analysing

Several beginner/accomplished beginners maintained that as a result of understandings gained from co-planning, they could analyse practice more effectively in post-lesson discussions. Amélia recorded how she learned *what can I analyse my lessons which was*

good, bad and why (Amélia, beginner, Diary). Boglárka commented that co-planning helped her become more self-questioning, it:

> *made me more...self-confident and conscious....in connection with the lesson I teach. Because when I talk to you.....I have to think of my lesson - the lesson's parts and my aims and how can they work or not and why and why and why and why and why. And it's very important to...make some things clear for me* (Boglárka, accomplished beginner, Interview)

Furthermore, co-planning sessions allowed me as an experienced practitioner to suggest a range of teaching techniques to the less experienced teachers. This enabled them to view phenomena from multiple not just single perspectives, to compare different ways of framing a problem to gain new insights into the situation. As Atilla wrote:

> *It is interesting to examine others methods, concepts...It was like some kind of examination....It was a little bit difficult but challenging at the same time.* (Atilla, beginner, Diary)

Identifying Salience

In post-lesson discussions, experienced teachers selected the most salient episodes to discuss in a clear, organised manner. Csenge began one post-lesson interview thus:

> *I'll just go through these activities and then I won't have to scan backwards and forwards.* (Csenge, experienced, Interview)

The beginner/accomplished beginners though were less focused and went through the lesson step-by-step covering all teaching events equally in a rather unfocused manner and had to rely heavily on my questions to guide the discussion. However, talking about

lessons in co-planning seemed to help them select the most salient phenomena to discuss post-lesson. Through co-planning we established a shared knowledge of the reasoning underpinning the teachers' decisions which served to declutter the context for post-lesson reflection enabling beginner/accomplished beginners to focus on critical pedagogic features. Anikó wrote:

> *I don't have to explain.....why I planned those activities. You knew them. And we could talk about how can I teach, or how can I carry out what we planned together.* (Anikó, beginner, Diary)

And Bella:

> *It was easy to talk you the lesson because we knew together the plan so we don't talk the plan but pupils and me.*
> (Bella, accomplished beginner, Diary)

Predicting

For the beginner/accomplished beginner teachers, co-planning fostered predicting skills which helped them interpret teaching phenomena both during and after the lesson. I believe this in turn, enhanced their reflection-in and on-action.

Reflection-in-action proved challenging for the beginner/accomplished beginner teachers and I noted many times how they failed to solve problems that arose while teaching. Either they did not recognise a problem, or did not know how to respond. However, co-planning seemed to prime teachers to recognise and respond to problems more readily if they did occur in the lesson. For instance, once Amélia attempted unsuccessfully to elicit illness vocabulary from her pupils (e.g. *I had a sore throat*). She responded by guiding them to the words she wanted, first unsuccessfully through

explanation, then successfully by showing pictures from her storybook. During co-planning we had not predicted this particular scenario although we had discussed unresponsive pupils in relation to a different lesson stage.

For me, this episode was without real significance as it occurred smoothly during the lesson but during the post-lesson discussion, Amélia selected this episode to discuss. She described the problem and her response and in doing so referred to two aspects of theory from her methodology course. First she mentioned in simple English, that teacher support should be contingent on pupils needs:

> *it wasn't in my plan.....they are a less talented group, I have to help them in this way. So I use the story book and I show them "What was here? And what was here? So what can we write there*? (Amélia, beginner, Interview)

And second, that pupils are skilled guessers in contexts meaningful to them, so could understand unfamiliar words from visual cues rather than explanation. To speculate, our co-planning discussion may have sharpened her sensitivity to key classroom phenomena so she could better notice triggers in the context that indicated that a problem required a response. This not only facilitated her ability to reflect-in-action but also carried over into reflection-on-action in that she could more easily select for reflection, episodes critical for her own growth and development.

Pedagogic Reasoning

I earlier characterized "Pedagogic Reasoning" as how teachers explained their understandings of teaching events using reasons drawn from pedagogy, a linking of theory to practice (Shulman, 1987). For the beginner/accomplished beginner teachers,

linking teacher knowledge to teacher action proved particularly challenging both in their teaching and how they reasoned about their teaching. Several teachers observed they knew in general what they should teach but not how to do it exactly. Bella reflected on one lesson thus:

> *I prepared for this lesson for many hours, lots of hours.....I planned to do these exercises but how, I didn't think over it...I wanted to do the exercise but* ***how?*** (Bella, accomplished beginner, Interview)

Also, beginner/accomplished beginner teachers tended to rely on personal opinion when explaining classroom phenomena rather than using ideas from pedagogy, suggesting they could not yet link what they knew about pedagogy to their actions in the classroom, to integrate theory and practice. However, co-planning seemed to facilitate this. Bettina wrote that the main thing she had learnt through co-planning was *to link the theory and the practice...it's the most important* (Bettina, accomplished beginner, Diary). Boglárka suggested something similar with: *it was useful for my work....to speak about my lesson with you....**how** I can teach this point in my lesson....grammar or something else* (Boglárka, accomplished beginner, Interview).

In conclusion, the experienced teachers appeared to develop a more conscious mode of thought through both co-planning and post-lesson discussions but the beginner and accomplished beginners emphasized co-planning as a critical source of teacher learning. Co-planning fostered skills in "Problem Setting", "Interpreting" and "Pedagogic Reasoning" which helped them reflect more effectively. I next examine how co-planning in particular supported teacher learning.

4.2.3.4 Conditions offered by co-planning to foster teacher learning

I believe co-planning may be a useful point of intervention because it allows for input on pedagogic theory and pedagogic skills, at a time when teachers are most receptive, and in ways that can effectively accommodate the complexities of learning. This rather general statement can be explored through three theories of explanation discussed in Chapter Two: cognitive apprenticeship, on task articulation, skill acquisition. On the one hand co-planning provided a learning environment conducive to key principles that these theories share. On the other, each theory offers individual insights into learning, insights which strengthen my own understanding of the co-planning phenomenon.

All three theories fuse social and cognitive perspectives in the learning process and emphasize how both the learning context and one's individual cognition shape learning. All three have collaboration at their core, recognising the importance of discussion in learning, acknowledging that with appropriate support, individuals can achieve more than they would independently. All three theories emphasize the role of metacognition in improving the quality of learning.

However, each theory also enriches my understanding in different ways. Cognitive apprenticeship describes six teaching methods that characterize forms of co-planning assistance. On task articulation emphasizes the importance of discussion and describes why providing explanations of one's reasoning while performing a task, fosters a more detailed and organised understanding. Skill acquisition explains how cognitive resources such as reflective skills needed for constructing and deconstructing experience can be enhanced, through activities compatible with deliberative practice.

The question still remains though as to why co-planning rather than post-lesson discussion proved more powerful to beginner/accomplished beginner teachers. To speculate, while on their own each theory of explanation cannot adequately explain the mechanisms of co-planning, taken together they can provide a compelling framework. Co-planning allowed for elements of cognitive apprenticeship, on task articulation and skill acquisition to interact in ways not possible with post-lesson discussions. This combination provided the structured cognitive support that Hungarian beginner teachers in early stages of acquiring skills such as problem solving, appear to need. I also believe the feature of on task articulation is pivotal to success as I discuss next.

It is likely that co-planning generated more of the type of talk such as analysing or reasoning described by Ericsson and Simon (1980) as invoking deep cognitive processing, and so more likely to trigger cognitive change than post-lesson discussions which involved more describing of events. Certainly all beginner and accomplished beginner teachers claimed co-planning was far more demanding than post-lesson discussions and had greater impact on their pedagogic thinking. Bella recorded:

> *Talking before the lessons* (was important) *because I thought more deep why I do this and how do I do it.* (Bella, accomplished beginner, Diary)

Also, as Berry and Broadbent (1984) argue, input combined with on task articulation is more effective than input offered after task completion because individuals have access to information at a time when it can be most easily linked to action. If Berry and Broadbent (1984) are right, this may explain why teachers felt co-planning which combined input for instance on pedagogy, teaching and cognitive skills with requests

for articulation, was more useful than post-lesson discussions where articulation and any input occurred post-task. Atilla referred to the importance of pre-lesson input thus:

> *after the lesson we could just analyse the lesson and the problems, etc. But when we were talking before the lesson we could exchange ideas. Actually Helen could change the lesson. A simple observation does not give this chance.* (Atilla, beginner, Diary)

Berardi-Coletta et al. (1995) claim that requests for articulation on task (e.g. *Why?* questions) may stimulate metacognitive processing so subsequent performance is also enhanced. If co-planning does indeed foster metacognition to the benefit of reflective capability in subsequent tasks, this may explain why participants perceived co-planning to be a critical source of learning.

Put differently, co-planning allowed for input to be provided in a way compatible with participants' learning needs at a time when new information could most effectively be accessed and processed. Co-planning involved jointly planning the participants' lessons so there were repeated opportunities for input with on task articulation. Input was highly relevant and personally significant as it was directly linked to action and the lesson to be taught. It was easy to make input contingent on individual needs given the collaborative nature of co-planning and some teachers benefitted from directive modelling but others from a more exploratory discussion. Finally, co-planning allowed for the explicit teaching of key cognitive skills in ways that were compatible with conditions of deliberative practice. For instance, the skills of "Problem Setting", "Interpreting" and "Pedagogic Reasoning" were used repeatedly as each individual task was planned. Participants first observed me performing these skills, then performed them for

themselves with appropriate support from me. Therefore, there was ample opportunity for practice with informed feedback.

To illustrate these ideas in practice, in my final section I present and analyse five co-planning episodes.

4.2.3.5 Co-planning episodes

Episode 1: Snowman Chant

Episode 1 illustrates the development of "Problem Setting" in particular, skills of identifying salience, backwards planning and analysing. Cognitive apprenticeship and the use of scaffolding and coaching is the theory of explanation that supports my analysis.

Problem Setting

Identifying salience

All beginner/accomplished beginner teachers struggled with "Problem Setting" and one particular area of difficulty was discerning the most critical features such as goals and procedures needed to construct reliable representations. Episode 1 illustrates how as an experienced practitioner, I assisted Atilla through the task of "Problem Setting".

Atilla wanted his seven-year-old pupils to memorize and perform a simple action chant. He initially planned in the manner typical of all the beginner/accomplished beginners by proceeding directly onto planning specific tasks rather than first framing the planning context. He started by showing me the course book page, talked a little about the pupils, and then moved almost immediately onto planning the warm up activity.

Atilla *...we can play.....drawing on the board and through the games we can revise the vocabulary we have learnt.*

Int. *Why would you do that?* (Question 1)

Atilla *...because the main reason the warm up activity is to have fun...so I think it's good to start with that.*

Int. *OK....well....what do you want the children to do by the end of the lesson?* (Question 2)

Attila (Short pause) *They have to....using the pictures, they should tell an action.*

Int. *And what language do they need to be able to tell the action story?* (Question 3)

Attila *Words and one sentence.*

Int. *What is it?* (Question 4)

Atilla *'Snow! Let's make a snowman! OK. 1, 2, 3. Eyes, mouth, nose. Yippee!'*

Int. *So, they have to be able to say this (*indicating book*) by the end of the lesson?* (Question 5)

Atilla *I think they will manage to do that....but we will see.*

Int. OK.....*Which ones are you going to teach actively?* (Question 6)

Atilla (Short pause) *Perhaps....these ones here. 'Eyes, mouth, nose, snow'.*

My questions scaffolded Atilla through "Problem Setting" by structuring and organising the activity for him. In particular, I focused his attention on the critical features in his context. Question 1 just asked him to explain why he selected his first activity but Questions 2 – 6 served to slow down his progress, pushed him to take a more deliberate approach and to construct some frame to his lesson. Question 2 asked him to identify

his goal state, Questions 3, 4 and 6 to identify key features needed for decisions about selecting and sequencing content such as the grammar and vocabulary pupils needed for task completion. Question 6 asked him to consider pedagogy and whether pupils needed to understand or to produce the new language as this would affect the mode of instruction selected.

Problem solving heuristic (backwards planning)

Question 2, *What do you want the children to do by the end of the lesson?* relates to a problem solving heuristic that emerged as significant for all beginner/accomplished beginner participants, that of backwards planning or starting with a conceptualization of the end goal, then working backwards from this to develop the plan. In Bella's words:

> *I can start what I would like them to reach....the end of the lesson....and then how we be able them to do.* (Bella, accomplished beginner, Diary)

Four of the six beginner/accomplished beginner teachers when asked a diary question: *What did you learn from co-planning,* replied, "backwards planning". Without exception, all the three experienced teachers automatically planned backwards, as Csilla expresses:

> *So first what I want them to learn. That is the first thing that I focus on and for this purposes I try to find the tasks and the activities and the exercises.* (Csilla, experienced, Interview)

But no beginner/accomplished beginner teacher did plan backwards and in fact appeared unaware of its usefulness as a problem solving heuristic. One teacher contrasted backwards planning with her normal strategy:

> *Because when **I** make my lesson plan, I start with the beginning. But when **we**...make a lesson plan we start at...what I want to the pupils at the end of my lesson. And I know what I want, I can make the whole lesson backwards. Because before I don't use this technique. I always start at the beginning...and at the end of my lesson plan I was bothering and I don't know...what was I do and why.....because when I make at the beginning of the lesson plan, I don't know what I want at the end.* (Amélia, beginner, Interview)

Backwards planning then, focused teachers' attention on their goal which then helped them map out the most critical features in their contexts such as their aims, their activities and the relationships that exist between them, something the experienced teachers did intuitively. In terms of "Problem Setting", backwards planning showed teachers how to frame, represent and so understand their problem situations more easily which in turn facilitated the search for solutions.

Analysing

I have suggested beginner/accomplished beginners were sometimes overwhelmed by information they faced and struggled to break down phenomena in a way needed for effective interpreting. My questions drew Atilla's attention to aspects he should address when analysing contexts, such as his goal (Question 2's focus), language needed for task completion (Questions 3 and 4), pedagogy to consider (Question 6) and that these aspects necessarily interrelate to produce a reliable understanding of the whole situation. For instance, I highlighted how considering relevant pedagogy (Question 6) would affect what words to teach and how to teach them which in turn influences the teaching solutions selected to aid progress towards his goal.

Episode 2: Snowman Chant (continued)

Episode 2 illustrates development in Atilla's "Pedagogic Reasoning". On task articulation is the theory of explanation that supports my analysis.

Pedagogic Reasoning

All the beginner/accomplished beginner teachers appeared to struggle to link what they knew about pedagogy to their actions in the classroom. Episode 2 illustrates how co-planning helped Atilla achieve deeper understanding of the pedagogic principle of meaningful output, that pupils must complete meaningful tasks where they choose the language they use, for language proficiency to develop (Pinter, 2006). All beginner/accomplished beginners were reluctant to plan for meaningful output perhaps because Hungarian traditions favour teacher-controlled interaction.

To recap, Atilla aimed for his pupils to perform a "Snowman" chant. Several times while co-planning I encouraged him to let pupils create their own versions of the chant *where they can actually say the words themselves, where they can change or.....create something* (Interviewer, Atilla's Planning Interview). Atilla though was hesitant because of concerns about control. He said:

> *I always have problems with these kids because they.....need a little control, so it's a little bit hard to change the things we've learned.*
> (Atilla, beginner, Planning Interview)

We did eventually plan for pupils in groups to create their own versions of the chant but I had to push Atilla to plan for this and in doing so I reminded him of the relevant theory (in emboldened print) at a time when it could be easily linked to action:

> *Look....you need to let them do something by themselves....**cos it's only that thinking that'll help them learn**...you could have a model "Let's make a pizza! Ketchup, cheese!"....And then... say, "Make your own pizza"* (Interviewer, Atilla's Planning Interview)

It is hard to make claims about Atilla's development of "Pedagogic Reasoning" from the limited data available but arguably he did begin to gain deeper understanding of meaningful output. For one thing, Atilla reflected on how pupils created their own versions thus:

> *So, that was the 'post' stage.....they could discover that they can manipulate the language, that they can use it creatively.....And I think that they managed to do that and they enjoyed working with the pizza activity.* (Atilla, beginner, Interview)

When Atilla said pupils, *can manipulate the language.....use it creatively* he referred to the principle of meaningful output. When Atilla said, *they managed to do that,* he referred to his pupils' achievements. This may imply he started to construe his teaching through pedagogic features in a way not evident earlier.

In addition, in reply to the diary question, *What did you learn from co-planning?* he recorded, *New ideas, new games, post stage is more important to use than I thought* (Atilla, beginner, Diary), *"post stage"* referring to the phase that caters for meaningful output. This also suggests he started to consider the pedagogic principle of meaningful output when thinking about teaching.

Episode 2 illustrates how Atilla had access to and opportunities to process information about meaningful output at an optimal time for growth. "Pedagogic Reasoning" was fostered as co-planning provided a bridge between what Atilla knew about pedagogy to his actions in the classroom.

Episode 3: Scripting the Story

Episode 3 and Episode 4 are two parts of one lengthy co-planning extract. Episode 3 illustrates how co-planning fostered a range of pedagogic, cognitive and language skills used in writing a storybook. A discussion of "modelling" supports my analysis.

In this co-planning session, Amélia (beginner) aimed to teach "was/were" plus illness vocabulary (e.g. "I was ill yesterday, I had a sore throat") to 11-year-olds and had decided to introduce these language forms through a home-made storybook. Amélia and I scripted the book's plot where a pupil Bobby played truant Monday, Tuesday, Wednesday, returned to school on Thursday claiming he had been ill.

Episode 3 contains different fonts to indicate the different interaction purposes:

~ italics represent the regular co-planning talk

~ emboldened italics (***This is Bobby***) represents the story plot

~ normal print (Where did...?) models the classroom English for Amélia to use

Int. *How about the name of the boy?*

Amélia *Maybe....Bobby.*

Int. ***This is Bobby.*** *Maybe you could ask....a listening focus question,* Is

Line 4 he a good or naughty boy? *So,* ***This is Bobby. He doesn't like.....?***

Amélia *...like* ***school.***

Int. ***On MONDAY, he got on the bus but he got off at****....and you could ask*

Line 7 Where did he get off?

Amélia *Maybe I tell - show picture of the Arkád...they know it, I think*

Int. *OK....And then you could say...*Did he go to school?

Amélia *No he didn't. (Both laugh)*

Int. ***On TUESDAY*** *and then you could repeat the same.* ***On WEDNESDAY...***

Line 12 *And then perhaps you could check the pupils understand, as here's a good time* Does his mother know?

Amélia *Noooo.....*

Int. *And then you could say "****On THURSDAY*** ***he got the bus, on the number 14 bus****".....****and went to school****. And then you could ask,* What did his teacher ask*? And maybe they would say in Hungarian* Hol voltál? (Where were you?) *And you could copy the dialogue in here that you want...from Project*

Amélia *Yes, OK*

Int. *And in it you have got "****What was the matter? You weren't at school....What was the matter? I was ill*** *And then when you*

Line 23 *highlight this, maybe you could just put on the board* I .....ill.....

The scripting of the story made visible the normally tacit pedagogic, cognitive skills and also language skills used in task completion. For instance, the comment *Maybe you could ask....a listening focus question* (line 3) reminds Amélia of pedagogy to consider when developing listening skills; *you could check the pupils understand, as here's a good time* (line 12) makes explicit the pedagogic reasoning underpinning my decision; "Where did he get off?" (line 7) models the classroom English to use; *you could...put on the board* (line 23), models how to present grammar in a way pupils can understand.

Episode 4: Scripting the story (continued)

Episode 4 follows on from Episode 3 and illustrates how co-planning supported skills of "Predicting" and "Problem Solving". In Episode 4, Amélia and I acted out the grammar presentation we had planned. Deliberative practice is the theory of explanation used to support my analysis.

Predicting and Problem Solving

Int. *.....on the board* I.....ill.....*And you could ask the children* (standing at blackboard as "teacher") What goes here...can you

Line 25 remember? *And if they don't know then you can write it in,* Miért kell ez a 'was'? (Why do we need 'was'?) Mit jelent? (What does it mean?*) And they might say?*

Amélia *(*as pupils) Igen.....voltam, voltam igen (Yes was, was yes). *Mmmmm....Yes, OK*

Int. You weren't at school. Miért 'weren't'? *Or* 'nem voltál*?'* (Why

Line 31 'weren't?')

Amélia Mert 'weren't' azt jelenti hogy 'nem voltál' (because 'weren't means 'nem voltál')

With the words *And if they don't know then you can.....*(Line 25) I predicted a problem that might occur, that pupils cannot answer the question. Then as "Teacher" I modelled how to respond (Lines 25 – 27). This prompted Amélia, as "Pupils", to act out how pupils might think and act. We later repeated this prospective scenario but swapped roles so I was "Pupils" and Amélia the "Teacher".

Brief or lengthy role plays occurred once or twice in each beginner/accomplished beginners' co-planning and emerged spontaneously from the interaction. I was rather uneasy role playing prospective episodes in this way as it seemed a rather manufactured thing to do. However for participants, role play emerged as a powerful source of learning and was nominated by four beginner/accomplished beginners when asked the diary question, *What did you learn from co-planning?* Bettina wrote:

> *It was good when she showed me the rhyme because I couldn't imagine how can I do and how can I solve the problem* (Bettina, accomplished beginner, Diary)

Table 4.6 "Sources of Learning" indicates that all beginner/accomplished beginners rehearsed their lessons at home. Boglárka commented:

> *I...try to imagine the situation in the lesson and I try to teach it.....it's like a film for me. "I will ask this. They can understand perhaps". I can think about some problems which can happen in the lesson and "Oh! Oh! What can be this? How can I solve this problem...if it will be?"* (Boglárka, accomplished beginner, Interview)

Similar sentiments were expressed by other beginner/accomplished beginner teachers that role play helped them visualise their prospective contexts which facilitated "Predicting" and "Problem Solving". However, role play during co-planning provided additional assistance to role play at home. As a more experienced practitioner, I could set up scenarios fairly close to the actual lessons because I knew what was likely to happen. This allowed participants to explore and practise skills such as "Predicting" and "Problem Solving" in real-life settings that were challenging but safe. Role play offered

teachers detailed insight into their prospective contexts. As "Pupils" they experienced the context through the eyes of children learning English, as "Teachers" through the teacher's lens.

Generally, in role plays I started as "Teacher" and participants as "Pupils". Then we invariably swapped roles. This allowed participants to first observe how to solve teaching problems and then practise what they had observed in ways that enabled me to monitor and improve their performance. For instance, with Amélia when I became "Pupils", I reacted differently to the role-play described above and was unresponsive to Amélia's attempts as "Teacher" to elicit "weren't". This pushed her to rethink how to solve this problem of grammar presentation, but with help from me. Put differently, role play allowed conditions of deliberative practice to come into play.

Co-planning embodied the power of modelling as a means of input and catered for key processes highlighted by Bandera (1996) as necessary for successful observational learning. Episodes 3 and 4 clearly accommodated 'Attentional processes' (Bandura, 1996:103), which suggests that learners need exposure to models of how others behave when performing tasks. Co-planning also catered for 'Representational and memory' processes as the input that participants observed was personally significant and memorable because co-planning built on their ideas, related to their contexts. Co-planning catered for 'behavioural production' as participants could rehearse through role plays, then reproduce in their teaching what they observed. In Amélia's actual lesson though, she elected to interact with pupils in just English, rather than the English/Hungarian mix we had used. As Bandura (1996) observes, learners do often reproduce what is remembered in modified not replicated forms. Co-planning catered for 'Motivational' processes as participants were motivated to do what they had

observed because the planning process was driven by their purposes, needs and interests. Finally co-planning catered for active participation (Tomlinson, 1999a) as participants were active while observing, so links between what they observed and their own contexts were more easily seen.

Episode 5: The Alphabet

Metacognitive processing

Episode 5 illustrates how the questions that prompted on task articulation may have promoted metacognitive processing. Bettina planned to teach the alphabet plus some vocabulary to her 10-year-olds and planned for three consecutive games that were superficially different but which shared the same learning aim of identifying letters. I questioned her decision.

Int. *But why would you do it? What's your aim?*

Bettina *Because here we identify the letters.*

Int. *And your aim here?*

Bettina *It's the same*

Int. *And here?*

Bettina *Yes...same too.*

Int. *So why do it three times?*

Bettina (Short pause*) No, it's the same. But this...I can't tell and I....want to give this sheet to the children....I would like to do...I....don't know why I do.* (accomplished beginner, Planning)

My *Why* questions aimed to elicit the reasoning underpinning her sequencing decisions but in effect they shifted her attention away from the activity of planning to examining

her reasoning. The confusion and uncertainty expressed in the last two lines of Episode 5 may indicate she was starting to reflect on, and question and possibly modify her own thinking thus triggering metacognitive processing as Berardi-Coletta et. al. (1995) suggest can happen. To recall, it is the development of metacognition that may enhance the quality of subsequent performance even when a more experienced practitioner (such as myself) providing prompt questions, is no longer present.

These five episodes then, aimed to illustrate how cognitive apprenticeship, on task articulation, skill acquisition can explain the power of co-planning in helping inexperienced teachers develop reflective capability.

In Chapter Four, I outlined my data analysis procedures and then presented the findings that resulted from that analysis. It is now appropriate to discuss these findings in detail, and this is what I turn to in Chapter Five.

CHAPTER FIVE DISCUSSION OF FINDINGS, RECOMMENDATIONS, EVALUATIONS

In Chapter Five, I first summarize then discuss the findings presented in Chapter Four to address the research questions posed below. Then, implications arising from my discussion are considered and specific recommendations made for teacher education in Hungary. I conclude by evaluating the research process and suggest avenues of future research.

The research questions are:

1. Do differences exist in reflective capability between nine Hungarian EYL teachers (English to Young Learners) with differing levels of teaching experience? If so, what are the differences and why might they occur?

2. What implications do any findings have on Hungarian teacher education?

My analysis in Chapter Four suggested that differences did exist. Support for this statement was presented through three main findings.

Finding 1: Beginner and accomplished beginner teachers reflected in ways similar to each other but differently from experienced teachers

Finding 2: Reflective capacity developed between post-lesson Interviews 1 and 2 for beginner/accomplished beginner teachers

Finding 3: Co-planning proved an effective point of intervention for developing reflective capability

5.1 Summary of findings

Finding 1

Evidence for Finding 1 was derived from my examination of participants' beliefs about education, of their anticipatory and their retrospective reflection. The beginner/accomplished beginner teachers held similar beliefs about education that mirrored the rather authoritarian transmission model of Hungarian education. The experienced teachers held different assumptions and clearly construed their teaching in ways that reflected constructivist principles. This contrast was evident in both the teaching approaches participants used and also how they reasoned about their practice. The beginner/accomplished beginners favoured teacher-controlled lessons with tasks that focused on memorization of language and interpreted pupils' language mistakes as negative, as a failure to learn. The experienced teachers favoured tasks where pupils explored language for themselves. Language mistakes that pupils made when using English, were viewed as positive, as evidence of learning.

My examination of anticipatory reflection also revealed that beginner/accomplished beginner teachers reflected in similar ways but differently from the experienced teachers. My analysis focused on two reflective skills of "Problem Setting" and defining the problematic planning situations, and "Interpreting" and how teachers made sense of those situations.

Concerning "Problem Setting", the experienced teachers invested considerable time defining the planning problem. They all established frames around new situations by identifying, then working backwards from their goals to map out their planning problems. This deliberate approach transformed their ill-defined planning situations into more solvable, well-defined ones. The beginner/accomplished beginner teachers were

far less deliberate. They had particular difficulties in identifying which contextual features to attend to, such as their goals or pupils' prior knowledge so could not frame ideas into plans of action but proceeded directly onto planning the details of the lesson.

With "Interpreting", the experienced teachers made sense of situations in detailed, principled ways. They drew inferences from information and predicted and prepared for problems with ease. The beginner/accomplished beginners though displayed less insight into phenomena. Their reasoning was less principled in that they attended to surface rather than underlying features so often failed to grasp the significance of the information they faced. Consequently understanding was often superficial. For instance, Attila (beginner) described how when planning a lesson, he had understood his textbook materials, the Teacher's Guide instructions but could not perceive the material's overall teaching aim, nor the aim of each teaching step, nor how the steps fitted together. His own confusion transferred to the lesson as unclear classroom management and instructions which ultimately also confused the pupils.

I suggested that because the beginner/accomplished beginners experienced difficulties with "Problem Setting" and "Interpreting", they could not construct reliable representations of their planning situations to make their planning problem more solvable.

Regarding post-lesson reflection, my analysis of the cognitive skills used in deconstructing classroom experiences, revealed differences in how teachers reflected on classroom phenomena. The experienced teachers thought and spoke about classroom events such as doing a listening activity, in complex ways, using various analytical skills. The beginner/accomplished beginners though reflected in a simpler manner and

used a narrower range of descriptive skills to deconstruct lesson events. Also, when the experienced teachers reflected on an incident, they combined individual statements into more complex patterns of information creating opportunities for inferential reasoning whereas the beginner/accomplished beginners tended to use individual statements. I suggested these differences helped explain the beginner/accomplished beginner teachers' less complex, less analytical and less informative reflections.

Another difference in post-lesson reflection emerged in problem solving skills. To gain insight into participants' problem solving capability, I examined how they used the processes of: identifying the problem, identifying its cause, selecting a solution and conducting an evaluation of the process. The beginner/accomplished beginners worked through fewer problem solving processes than the experienced teachers, and usually just identified the problem and solution but rarely considered the causes or evaluated the process. The experienced teachers almost always worked through all four processes. This suggested that the beginner/accomplished beginners solved problems in a less thorough, less principled and less critically aware manner than experienced teachers.

Finding 2

Evidence to support Finding 2 that the reflective capability of beginner/accomplished beginner teachers developed between post-lesson Interviews 1 and 2 was derived from my comparison of the cognitive skills teachers used to deconstruct experience in these two interviews. In Interview 2, beginner/accomplished beginner teachers used a wider range of skills when reflecting on individual lesson events than in Interview 1 including an increased use of "Commenting". They also increased their use of "Pedagogic Reasoning" at Intermediate level implying they were drawing on a wider range of knowledge sources to support their reasoning. Third, they increased their overall use of

analytical skills such as "Evaluating" in proportion to descriptive skills. Taken together, these indicators suggested that the beginner/accomplished beginners were starting to reflect in more analytical, informative, complex ways. The interesting feature about this though, was that most beginner/accomplished beginner teachers hardly taught between Interviews 1 and 2, and so had limited opportunity to develop by actually reflecting on practice.

Finding 3

Evidence to support Finding 3, that co-planning proved an effective point of intervention, was drawn from the views of the participants themselves and my analysis of co-planning data.

All six beginners/accomplished beginner teachers identified co-planning as a critical source of teacher learning. They emphasized that the combination of collaboration and instruction in co-planning fostered their pedagogic knowledge and reasoning skills which helped them reflect more effectively. Some key sub-skills of reflection nurtured through co-planning included "Problem Setting", "Interpreting", "Analysing", "Predicting", "Identifying salience" and "Pedagogic Reasoning".

I suggested co-planning proved a useful point of intervention because it allowed for input on pedagogy and reasoning skills in ways that could effectively accommodate the complexities of learning, at a time when teachers were most receptive. In particular, co-planning allowed for elements of cognitive apprenticeship, on task articulation and skill acquisition to interact in ways not possible with post-lesson discussions and diaries. Co-planning was situated in the real-life context of lesson planning, and provided the

structured cognitive support that beginner teachers in early stages of skill acquisition appear to need.

5.2 Discussion of findings

Research Question 2 considers how these findings impact on Hungarian initial teacher education and is summarized under the headings of three themes.

5.2.1 Skill-based nature of reflection

One issue that has implications on my own professional practice is that reflection can be interpreted as skill-based in nature, as a complex, open skill with sub-skills which should be mastered and coordinated to achieve proficiency. Arguably, one reason why beginner/accomplished beginner teachers reflected less effectively was because they experienced difficulties with some sub-skills of reflection such as "Problem Setting" which constrained their overall reflective capability. Many of the differences between the experienced and beginner/accomplished beginner teachers echo those between novices and experts in other professions. A brief review of these differences can provide clues as to why they occur and how to foster reflective capability.

I suggested my beginner/accomplished beginner teachers spent little time organising and understanding the problem conditions for themselves but proceeded directly onto searching for solutions. This feature is reported elsewhere as characteristic of novice teachers (Borko and Livingston, 1989) and novice scientists (Voss et. al., 1983). I also claimed that my experienced teachers could perceive teaching problems through their underlying causes and principles. This feature is also reported as characteristic of expert physicists (Chi et. al., 1980) and expert teachers (Berliner, 1994). My beginner/accomplished beginners teachers could not discern important from

unimportant information in teaching phenomena as Carter et. al. (1988) found with novice teachers. My experienced teachers articulated in complex, detailed ways, creating extended chains of reasoning which echoes findings with expert radiologists (Lesgold et. al., 1988), teachers (Allen and Casbergue, 1997) and literary experts (Zeitz, 1994).

Expert and novice differences are usually explained in skill psychology in terms of how individuals organise the knowledge they possess in long-term memory, in knowledge structures termed schemata. With experience our schemata become increasingly elaborate and organised in ways that contribute to proficient performance. Ericsson and Lehmann (1996) highlight how experts' principled retrieval makes it easier to analyse problems in principled ways. Zeitz (1994) claims experts can create complex patterns of reasoning because this principled retrieval helps them select and link critical ideas into coherent structures. Berliner (1994) argues the elaborate, principled schemata of experts helps them detect meaningful patterns in information which supports interpreting skills and Alexander (2005) that such meaningful patterns help experts evaluate the relevance of information and so which elements to attend to. In contrast, novices organise what they know less effectively. They cannot benefit from the advantages that elaborate, well-organised schemata bring, so performance is less proficient.

Knowledge about novice-expert differences can assist my practice as a teacher educator. If principled reasoning is indeed critical to proficient performance then teacher educators should strive to develop a principled understanding of content in beginner teachers. In my analysis of co-planning Episode 1 (page 170), I highlighted how Atilla was helped to notice key aspects of his situation such as his goal, relevant pedagogy and how they interrelated. Conceivably, this structured approach nurtures a principled,

coherent understanding of lesson content in a way that may help foster the principled reasoning that supports the development of reflective skills.

It can also be useful to identify aspects of expert performance which support the performance of beginners. My data analysis revealed that experienced teachers linked up individual statements into more complex patterns of information by the giving of opinions and examples. As a result I have prompted beginner teachers to follow their statements with an "I think" or "For example" phrase to trigger the giving of opinions and examples and encourage them to reflect in more elaborate, informative ways in the manner of experienced teachers.

5.2.2 Subject-specific nature of pedagogic reasoning

A second main theme emerging from my findings is one that has implications on the new system of teacher qualification in Hungary. The evidence in this study suggests that the accomplished beginners, who are experienced teachers of Hungarian subjects but beginner teachers of English, reflected on teaching in similar ways to the beginner teachers. There was little evidence of transfer of pedagogic skills and knowledge from their area of expertise (teaching in Hungarian) to the area of non-expertise (teaching English). This was evident both in their reasoning and how they analysed teaching problems and also their practice. For example, Boglárka knew how to help pupils overcome difficulties learning a song in Hungarian but could not help the same pupils overcome difficulties learning a song in English, even though the two settings were identical. My findings then suggest a close link between a teacher's subject knowledge and her pedagogic reasoning and practice, that teachers need a firm grasp of their subject to be able to reflect on problems and solve them. Put differently, pedagogic

reasoning is highly context-specific. I believe the new system for teacher qualification in Hungary does not fully recognise this context-specific nature of teacher's knowledge.

The 2005 Act on Higher Education (Ministry of Education, 2008) radically restructured Hungarian higher education introducing a new 3-year Bachelor, 2-year Masters, 3-year PhD degree structure. A new model for teacher preparation was also introduced. Under the old system for teacher training (phased out by 2009/10), three types of independent training institutions existed. Lower Primary Colleges prepared teachers for the 6 – 10/12 age group, Upper Primary Colleges for the 10 – 14 age group and Universities for the 14 – 18 age group. Training was highly contextualized in that teachers acquired subject knowledge and relevant pedagogic skills that teaching different ages and subjects call for.

Under the new system, initial teaching qualifications can be obtained in two ways.

- A two-year Master's of Education (M.Ed.) which covers the 6 – 18 age range. These M.Ed. programmes generally started in 2009
- A four–year Bachelor of Education (B.Ed.) for the 6 – 10 age range. These courses were phased in from 2006

The new B.Ed. programmes are similar to the former Lower Primary College teaching degrees but initial teacher qualification at M.Ed. level operates within a far more general framework than previously. There is for instance, no explicit provision in M.Ed. programmes for age-related studies. Trainee English teachers for the 6-10, 10-14 and 14-18 age groups tend to study similar subjects such as general psychology and language pedagogy. It is assumed new teachers can transfer and apply one set of teaching skills between different age groups. However, current research into teaching

English to young learners (Pinter, 2006) emphasizes how very specialized skills are needed for different age groups, that 10-year-olds acquire grammar differently to 15-year-olds and so require different forms of assistance. Subject knowledge then varies somewhat according to the age group. My findings suggest close links between subject knowledge and pedagogic reasoning so arguably the new M.Ed. courses fail to help new teachers develop the pedagogic know how they need, so they can use what they know when teaching the age group of their choice.

I could not find any research-based evaluation of these new M.Ed. programmes. However, in a recent newspaper interview (Wurmbrandt, 2010), Cseh Sandor my university's Dean, expressed concern over the reforms initiated by the 2005 Act on Higher Education. He claimed the speed with which reforms were implemented led to poorly planned degree courses and in many cases key areas of learning and development were simply left out, a criticism I believe aptly applies to the current lack of age-related studies in the M.Ed. teacher qualification system.

Another related issue arising from this link between subject knowledge and pedagogic reasoning has implications for the in-service English methodology programmes at my institution which retrain experienced teachers of Hungarian to teach English. The in-service programme shares the same general course goals as the pre-service programme but the in-service participants receive less help in developing their practical teaching skills. There is for instance, no teaching practice component, or help with lesson planning and participants are not asked to keep learning journals. Course providers such as myself, have always assumed that the in-service participants as experienced teachers, bring with them a highly developed set of pedagogic thinking skills that

enables them to explore new ideas, develop new insights and use what they study in their own practice.

However it was quite clear that this does not necessarily happen, that the in-service teachers (my accomplished beginners), tend not to use in their practice the new knowledge they meet on their in-service programmes. They expressed repeatedly that they understood the new ideas and principles they encountered, but not how to use that information. Boglárka commented on a session on pair and group work in English lessons thus:

> *When I am sitting in your lessons, I try to imagine the situation and you always say 'Do in groups...do in pairs...try to do it with your children. Let's try in pairs....' And I was afraid of this activity, because it's much more difficult than working together or just 'You say and you say and you say.'* (Boglárka, accomplished beginner, Interview)

NB: "*working together... 'You say and you say*" refers to teacher-directed interaction.

She was unsure of how to use new ideas, so ignored them and just relied on the traditional teaching methods with which she was comfortable. Thus, new information encountered on her English methodology programme had minimal impact on her practice. Boglárka's comments suggest it may be inappropriate for course providers to assume that experienced teachers can transfer and use reasoning skills developed in one subject, to a new subject area. Teachers' reasoning operates well in subjects they know well, but in subject areas of non-expertise experienced teachers may need similar help to beginner teachers with processing knowledge so that it can be used.

5.2.3 Co-planning fosters reflective capability

A third main theme emerging from my findings is one that has implications for training approaches and the fostering of reflective capability. To recap, Finding 1 indicated that the beginner/accomplished beginner teachers reflected in different ways to the experienced teachers. These findings are consistent with the claims in the literature that a teacher's reflective capability is closely related to the experience they possess, that teachers reflect more analytically with experience (Ross, 1989). However this notion of levels of reflection cannot really explain my conclusions from Finding 2, that reflective capability of beginner/accomplished beginner teachers developed. Four of them had very little teaching experience between Interviews 1 and 2 with limited opportunity to develop reflective skills by actually reflecting on practice. What Finding 2 does suggest though, is that reflective capability can be actively promoted and my discussion of Finding 3, that co-planning emerged as more effective than diaries and post-lesson talk for developing reflective capability, can suggest why.

My discussion of Finding 3 needs to be set within the educational context of Hungary. For this, I refer back to three contextual features highlighted in Chapter One and argue that these create very specific training needs for Hungarian students which are best met through co-planning. These features are: the traditional classroom culture, the systems of mentoring and of assessment.

5.2.3.1 Classroom culture

To recap, Hungarian education is predominantly transmission-based, a model that fails to foster the strategic thinking skills underpinning reflective capability. Some researchers (e.g. Dewey, 1933) imply that reflective capability develops naturally with experience while others (Korthagen, 2001b) believe reflective thinking should be

actively cultivated perhaps by providing conditions that foster reflection (Hatton and Smith, 1995) or by explicitly developing the strategic thinking skills needed to explore practice (King, 1991). Various Hungarian researchers (Kerber, n.d.,) have observed that Hungarian teachers tend not to use tasks such as project work that allow such thinking skills to develop. Kárparti (2009) notes that the Ministry of Education's own criteria for teacher qualification omits the competency of highlighting and solving problems, a competency most other EU countries include. This suggests at the level of policy makers, the development of strategic thinking is not yet a full priority.

Moreover, my work highlighted how the traditional teaching culture constrained teachers' efforts to explore new ideas encountered on their English EYL programmes. Amélia wrote:

> *The...two thing: subject and the school is determine our approach. Sometimes it can be that it* (the school) *is very different from here* (training institution) *and it is hard for us to do the English teaching like here.* (Amélia, beginner, Diary)

Participants also reported pressure from pupils and colleagues to conform to traditional methods. One accomplished beginner attempted unsuccessfully to use games in Hungarian science lessons and a beginner teacher to use group work in maths lessons. In both cases, the pupils themselves resisted attempts to learn Hungarian subjects through methods they accepted in English lessons. Another accomplished beginner told how she was criticized by colleagues and parents for doing project work as it was not considered useful for her pupils.

5.2.3.2 Mentoring styles and assessment

I described mentoring as fairly traditional in that feedback is summative, marks are awarded for lesson plans, teaching and lesson reflections and the number of contact teaching hours is low. I have argued that we learn about teaching by recognising, analysing and solving our teaching problems. However, in the Hungarian context where problem-free performances are rewarded with good marks (implying problems are therefore negative), where good marks are rewarded financially, learners may be reluctant to acknowledge their problems and be truthfully self-critical. Several participants referred to this issue suggesting they modify their lesson reflections to what mentors wish to hear rather than ideas the trainees wish to express. Atilla wrote:

> *The easier way (*in Hungarian TP*) is to say what the teacher want. I know it is not good but we do this.* (Atilla, beginner, Diary)

And Anikó:

> *In the Hungarian I'm very very careful because..... the mark for the lesson.* (Anikó, beginner, Diary)

If students reflect for good marks rather than for self-growth, skills underpinning reflection such as analysing, interpreting, problem solving, have little scope to develop.

I discussed earlier the current focus on the role of retrospective reflection in learning and that traditionally, beginner teachers are helped to develop their teaching through post-lesson discussions where they solve problems after they have occurred. My findings indicated that beginner/accomplished beginner teachers find this hard to do. This might be because of the Hungarian context. The low number of teaching practice hours, strict mentoring style, traditional classroom culture, pressure from pupils and

colleagues limit the time and opportunity for beginner teachers to experiment, to explore their practice and develop problem solving skills underpinning reflective thinking. Or, if reflection is indeed skill-based, and developmental stages in skill learning can be distinguished then beginner teachers lack the subject knowledge and processing strategies needed for effective problem solving (Alexander, 2005). Or a combination of these two factors may explain why Hungarian beginner teachers struggle to reflect effectively.

Whatever the reasons, the point to highlight is that beginners may need more structured support to develop the strategic thinking skills that lead to effective reflection than retrospective reflection provides. It is feasible that co-planning proved effective because it provided the very directive assistance that beginners need. Co-planning focused on anticipatory reflection. It showed participants the steps involved in solving problems before they occurred and in doing so developed the sub-skills of reflection that enable individuals to learn from practice.

5.3 Recommendations

This discussion has highlighted a number of issues which can now be usefully shaped into specific recommendations for teacher education in Hungary.

Recommendation 1

A link emerged between teachers' subject knowledge and their pedagogic reasoning which points to the highly contextualized nature of teacher knowledge, a finding that underpins my first recommendation that addresses policy makers. I recommend that pressure be put on the Ministry of Education to review the new teacher training curriculum, in particular the new M.Ed. courses. These courses prepare teachers for all

ages within one general framework but given that knowledge varies according to the age group and teachers reason effectively if they know their subject well, I believe there is a need to reintroduce more explicit age-related studies. This may help new teachers work effectively within the level of schooling of their choice.

Recommendation 2

My findings suggested that beginner teachers in early stages of development may benefit more from the directive assistance offered by co-planning than the assistance offered by post-lesson discussion and this underpins my second recommendation that addresses teacher educators. If co-planning is indeed a powerful point of intervention in teacher learning, it seems reasonable to suggest that teacher educators shift the current focus off retrospective reflection in the form of post-lesson discussion and onto anticipatory reflection in the form of co-planning. In Hungary it may even be beneficial to just co-plan lessons with beginner teachers and postpone the use of post-lesson discussions on teacher preparation courses until students have developed the skills needed for effective reflection.

Recommendation 3

My analysis revealed that experienced teachers learning to teach a new subject, think and act like beginner teachers and this finding underpins my third recommendation which addresses the in-service course providers at my own institution. I recommend that course providers give similar support to in-service participants to develop their pedagogic reasoning skills, to that given to beginner teachers. Such support might include introducing activities that cultivate reflective thinking skills such as co-planning lessons or explicit instruction in analytical reasoning skills.

Recommendation 4

This research revealed the divide in Hungarian education between transmission-based and constructivist-based approaches to teaching and learning at all levels of the education system and how my study's participants struggled to accommodate the two approaches in their work. For instance, sometimes teachers wanted to explore new ideas but did not know how to introduce them in their teaching. This finding underpins my fourth recommendation for course providers at my training institution. We should address the issue of how to introduce educational innovation in traditional learning contexts. This might involve for example, examining the notion of shared responsibility that suggests change is more likely to succeed through a teachers' group rather than on an individual basis.

Having summarized and discussed my findings, then highlighted recommendations for Hungarian teacher education, it is now appropriate to reflect on my work. Next I evaluate first the research process, then my own self-development. I conclude Chapter Five by suggesting directions for future research.

5.4 Reflections

5.4.1 Evaluation of the study

Two criteria suggested by Hamersley (2007) can usefully frame my evaluation. One criterion concerns the validity of the findings or whether an account 'accurately represents the phenomena to which it refers' (Hammersley, 2007:192). The other criterion is the relevance of the findings not only in terms of the importance of the topic and how far findings relate to practice but also the contribution findings can make to the existing body of knowledge.

5.4.1.1 Validity

Concerning how far my data collection methods provided me with accurate data for my study, I acknowledge my work could have been improved. The semi-structured interviews and diaries were valuable tools and yielded much useful information that linked to my research questions and helped me to explore developing aspects of my study. However in retrospect there are definitely areas that needed to be refined. For instance, my interviewing skills were wanting, especially given the second language context of my study. If participants' contributions in English were unclear, I sometimes reformulated their words but inadvertently changed their intended meaning to what I wanted to hear. Also, I sometimes asked two or three slightly different questions at the same time (*What's your opinion of this? How do you feel it went? Talk me through what happened).* This is not an issue for first language speakers but may have confused my participants with lower levels of English.

One problem with diaries was that entries were brief and descriptive possibly because of attitudes to diary writing in Hungary, or because questions I set to frame the diary writing process elicited issues concerning my research rather than issues participants wanted to share. The entries then, did not yield data on how teachers constructed and deconstructed practice in the manner of the interviews. So I used diaries largely for triangulation purposes but in hindsight, I should have considered how to use diaries more effectively in my study.

Concerning data analysis procedures, as a mainly insider researcher working within an interpretive paradigm, my data interpretation was open to bias. Guided by Bassey's (1999) recommendations, I did implement various triangulation methods to combat bias. I used for instance, investigator triangulation and also provided an 'audit trail'

(Bassey, 1999:77) so details of how my data analysis produced my interpretations are available for someone else to check. I did not however engage in respondent validation although I recognise that it could have enhanced the validity of my interpretations. Participants did receive copies of their interview transcripts but not my interpretations of their data because I worried that if I knew participants could comment on my analysis, this would constrain my interpretations.

5.4.1.2 Relevance

To Hungary

I believe my study benefits initial teacher education in Hungary on a number of levels. At the level of my own professional practice, because my investigation was triggered by the work-related problem that beginner teachers experience difficulties with reflection, any findings link directly to my practice. For instance, one significant discovery has been that both Hungarian beginner teachers and experienced teachers retraining to teach English need more assistance on how to reflect on practice than I and my colleagues have been providing. In response, we are starting to change our practice to the benefit of participants. Second, at the level of policy makers, my study raises concerns about the effectiveness of the new framework for teacher education, that the omission of age-related studies on M.Ed. programmes fails to develop the highly contextualized knowledge that teachers need in order to teach effectively. Third, as Hungarian education gradually embraces constructivist approaches to learning, reflective practice is gaining recognition. However reflective practice in Hungary is under-researched. My study examines reflective thinking of Hungarian teachers and therefore may be relevant to fellow Hungarian teacher educators.

Teacher Education

I have argued that contextual variables inform both what reflection is and how it should be fostered. By exploring a well-researched topic (reflection) in a new context (Hungary) I have gained fresh perspectives on reflection that can contribute to the field of teacher education.

What I believe is new, is my attempt to integrate two research fields. These two fields are separate but address some aspects of teaching and learning in notably similar ways. By researching reflective thinking within a framework that combines research into reflection with cognitive skill psychology, I believe I could compensate for the shortcomings both fields possess.

Research into reflection provided insight into the substance and nature of reflection. However, some unanswered questions remained such as what teachers do when they reflect, how they learn and what helps them learn to reflect. These were key questions for me given that I compared beginner and experienced teachers for insight into teacher learning.

One particularly pertinent area of skill psychology concerned acquisition and the notion that complex skills are comprised of sub-skills which should be learnt to achieve overall proficiency. By conceptualising reflection as a complex cognitive skill, I could identify and compare sub-skills of reflection, the cognitive and metacognitive skills teachers use when constructing and deconstructing their practice for insight into what teachers do when they reflect. Notions of deliberative practice and stages of development clarified how students learn to reflect and the support they need. Clearly, separating cognition from contextual, social and emotional variables can create a fragmented view of teacher

thinking. But, drawing on skill psychology to illuminate reflective practice has enabled me to generate new explanations and provide suggestions for enhancing reflective capability. This I believe, is of value to the existing body of knowledge.

Concepts from skill psychology help explain the expert turned beginner paradox revealed by my findings that experienced teachers of Hungarian subjects reasoned like beginners when teaching their new subject of English. In skill psychology, reasoning is determined by the nature of one's knowledge system. Sophisticated reasoning derives from the rich, well-organised schemata we gradually develop in a specific field. This implies that teachers need in-depth subject knowledge to effectively reason about it. Thus when teaching Hungarian, the accomplished beginners can recognise the concepts to highlight for pupils, the possible problems to deal with, because they understand the core principles and theories of Hungarian subjects. They lack such in-depth understanding of English so reason about, teach and reflect on English lessons less effectively.

Concerning suggestions, skill psychology offers guidance on how cognition can be fostered to improve overall reflective capability, information I have adapted to the field of teacher education. I have been able to recommend co-planning as one mechanism for supporting teachers' reflective capability, possibly an initiative of relevance to other teacher educators working in similar circumstances

5.4.2 Evaluation: self-development

Conducting this research has been a major learning experience for me on both a professional and personal level. Professionally, the reading and analysing of literature on reflection and skill acquisition has pushed me to examine my practice in ways I have

not achieved before. This is something I anticipated might happen. One unexpected benefit has been the relationship that has developed between school-based mentors and university staff at my department. Previously there had been little contact, simply because professional co-operation is not really characteristic of educational institutions in Hungary (Magnuczné, 2000). One mentor (Csenge) participated in my study, we have now established a healthy professional relationship and communicate regularly about our students' needs and course content. Csenge also now tutors on the English methodology programme at my department and we both believe this new co-operation has narrowed the tension the student teachers often perceive between their school-based and institution-based studies.

It is hard to express how I have profited on a personal level. I have become increasingly self-aware, more articulate and a more critical thinker as a result of undertaking the research. One unforeseen benefit is that I have gained a more explicit understanding of how Hungarian society works and my own place within it. This is partly because conducting research in Hungary as a non-Hungarian pushed me into a more self-questioning mode. As I constantly pondered over differences between my own and participants' interpretations of research events, I had to examine and compare my own frames of reference with theirs. I now see quite clearly that how I see the world is not necessarily the correct version, something unconsciously I assumed at the outset to my study, but simply an amalgamation of assumptions and judgements, different from my participants' but assumptions and prejudices just the same.

I talked to teachers a lot about their work. I read a lot about Hungary and used this information to help me understand why participants thought and behaved as they did. I have become aware for example, of how legacies of communism still continue to shape

society today. I have long felt that the constant educational reform since 1990 has had little meaningful impact on teaching and learning in schools and universities. From Radó's (2001) work I learnt reform often fails because the strategic thinking skills of policy makers and teachers that are crucial to introducing innovation and change, are underdeveloped. Strategic thinking was discouraged under communism which favoured a transmission educational model as one that maintained the status quo. These skills remain underdeveloped today making it hard to manage any innovation effectively.

5.5 Future directions

Various questions emerged during this study that could be investigated in future research. One issue concerns how the accomplished beginners reflected on their new subject like beginner teachers. An interesting future research project could extend this theme by asking accomplished beginners to reflect (in English) in their areas of expertise such as maths lessons as well as their non-expertise area of English teaching. Comparing their reflective capacity in areas of expertise and non-expertise may provide further information to support or contradict my study's findings that indicate strong links exist between subject knowledge and pedagogic reasoning. This may be a valuable addition to this research area.

A second issue addresses the language used when reflecting on teaching. Participants reflected in their second language of English, their levels of language proficiency varied and so I examined the cognitive processes teachers used, to gain insight into reflective capability. A similar investigation asking teachers to reflect on their teaching in both Hungarian and English, may reveal whether the language that teachers use when reflecting, changes how they reflect, whether a lack the professional discourse in English constrained their ability to theorise about their teaching. Findings from such an

investigation could inform mentors on whether Hungarian students should reflect on their English teaching in Hungarian or English.

It was outside the scope of this work to assess the success of the new system for teacher qualification. However my study has highlighted the importance of subject knowledge in pedagogic reasoning and has made me realise the urgent need for large-scale studies to evaluate the current system of teacher qualification. An interesting future research project could be to evaluate how the lack of age-related studies within the new programmes is affecting the work of teachers.

REFERENCES

Abou Baker El-Dib, M. (2007) 'Levels of reflection in action research. An overview and an assessment tool', *Teaching and Teacher Education*, vol. 23, no. 1, pp. 24-35.

Alexander, P. A. (2003) 'The Development of Expertise: The Journey From Acclimation to Proficiency', *Educational Researcher*, vol. 32, no. 8, pp. 10-14.

Alexander, P. A. (2005) 'Teaching towards expertise', in P. Tomlinson, J. Dockrell and P. Winne, (Eds.) *British Journal of Educational Psychology, Monograph Series II, Number 3, Psychological Aspects of Education: Current Trends, Pedagogy – Teaching for Learning,* Leicester, British Psychological Society.

Allen, R. and Casbergue, R. (1997) 'Evolution of novice through expert teachers' recall: Implications for effective reflection on practice', *Teaching and Teacher Education,* vol. 13, no. 7, pp. 741-755.

Anderson, J. R. (1982) 'Acquisition of Cognitive Skill', *Psychological Review*, vol. 89, no. 4, pp. 369-406.

Anderson, J. R., Reder, L. M. and Simon, H. (1996) 'Situated Learning and Education', *Educational Researcher*, vol. 25, no. 4, pp. 5-11.

Atkins, S. and Murphy, K. (1993) 'Reflection: a review of the literature', *Journal of Advanced Nursing*, vol. 18, no. 8, pp. 1188-1192.

Bailey, K. (1995) 'The use of diary studies in teacher education programmes', in J. Richards and D. Nunan, (Eds.) *Second Language Teacher Education*, Cambridge, Cambridge University Press.

Bain, J. D., Ballantyne, R., Packer, J. and Mills, C. (1999) 'Using journal writing to enhance student teachers' reflectivity during field experience placements', *Teachers and Teaching: theory and practice*, vol. 5, no. 1, pp. 51-73.

Balassa, K., Bodóczky, C. and Saunders, D. (2003) 'An impact study of the national Hungarian mentoring project in English Language Training', *Mentoring and Tutoring,* vol. 11, no. 3, pp. 307-320.

Bandura, A. (1996) 'Social Learning Theory of Human Development', in E. De Corte and F. E. Weinert, (Eds.) *International Encyclopaedia of Developmental and Instructional Psychology*, New York, Pergamon.

Banks, F., Leach, J. and Moon, B. (1999) 'New Understandings of Teachers' Pedagogic Knowledge', in J. Leach and B. Moon, (Eds.) *Learners and Pedagogy,* London, Open University Press.

Bassey, M. (1999) *Case Study Research in Educational Settings*, Buckingham, Open University Press.

Berardi-Coletta, B., Dominowski, R., Buyer, S. and Rellinger, E. (1995) 'Metacognition and problem solving: A process-orientated approach', *Journal of Experimental Psychology: Learning, Memory and Cognition*, vol. 21, no. 1, pp. 205-223.

Berliner, D. C. (1986) 'In Pursuit of the Expert Pedagogue', *Educational Researcher*, vol. 15, no. 7, pp. 5-13.

Berliner, D. C. (1994) 'Expertise: The wonder of exemplary performances', in J. M. Mangier and C. C. Block, (Eds.) *Creating powerful thinking in teachers and students: Diverse perspectives*, (online) Fort Worth TX, Holt, Rinehart and Winston, http://courses.ed.asu.edu/berliner/readings/expertise.htm (accessed 18 October 2008).

Berry, D. C. and Broadbent, D. E. (1984) 'On the relationship between task performance and associated verbalizable knowledge', *Quarterly Journal of Experimental Psychology,* vol. 36A, pp. 209-231.

Borko, H. and Livingstone, C. (1989) 'Cognition and improvisation: Differences in mathematics instruction by expert and novice teachers', *American Educational Research Journal*, vol. 26, no. 4, pp. 473-498.

Boud, D. and Walker, D. (1998) 'Promoting reflection in professional courses: The challenge of context', *Studies in Higher Education*, vol. 23, no. 2, pp. 191-206.

Bransford, J. D., Brown, A. L. and Cocking, R. R. (1999) *How People Learn: Brain, Mind, Experience, and School,* (online), National Research Council, Washington D.C., National Academy Press, http://books.nap.edu/openbook.php? record_id=6160&page= 36 (accessed 11 November, 2009).

Brown, S. and McIntyre, D. (1993) *Making Sense of Teaching*, Buckingham, Open University Press.

Burgess, H., Sieminski, S. and Lore, A. (2006) *Achieving Your Doctorate in Education,* London, Sage.

Carter, K., Cushing, K., Sabers, D., Stein, P., & Berliner, D. (1988). 'Expert-novice differences in perceiving and processing visual classroom information', *Journal of Teacher Education,* vol. 39, no. 3, pp. 25–31.

Chi, M. T. H., Feltovich, P. J. and Glaser, R. (1981) 'Categorization and representation of physics problems by experts and novices', *Cognitive Science*, vol. 5, no. 2, pp. 121-152.

Clandinin, D. J. and Connelly, F. M. (1990) 'Stories of Experience and Narrative Inquiry', *Educational Researcher*, vol. 19, no. 5, pp. 2-14.

Clark, C. M. and Yinger, R. J. (1987) 'Teacher Planning', in J. Calderhead, (Ed.) *Exploring Teachers' Thinking*, London, Cassell.

Clegg, K. (2004) 'Improving Learning through Reflection, Part 1', (online), The Higher Education Academy, York, http://www.heacademy.ac.uk/assets/York/documents/ resources/ resourcedatabase/id485_improving_learning_part_one.pdf (accessed 14 April, 2009).

Cohen, L. and Manion, L. (1996) *Research Methods in Education,* London, Routledge.

Collier, S. T. (1999) 'Characteristics of reflective thought during the student teaching experience', *Journal of Teacher Education*, vol. 50, no. 3, pp. 173-181.

Collins, A., Brown, J. S. and Newman, S. E. (1987) 'Cognitive apprenticeship: Teaching the crafts of reading, writing, and mathematics', (Technical Report No. 403), Cambridge MA, BBN Laboratories, Centre for the Study of Reading, University of Illinois.

Common European Framework of References for Languages, Council of Europe, Strasbourg, http://www.coe.int/T/DG4/Linguistic/Source/Framework_EN.pdf (accessed 3 August 2008)

Davidson, J. E. and Sternberg, R. J. (1998) 'How metacognition helps problem solving', in D. J. Hacker, J. Dunlosky and A. C. Graesser, (Eds.) *Metacognition in Educational Theory and Practice*, New Jersey, Lawrence Erlbaum Associates.

Day, C. (1993) 'Reflection: A necessary but not sufficient condition for teacher development', *British Educational Research Journal,* vol. 18, no. 1, pp. 83-93.

Debreczeni, P. (2003) 'Changing Approaches to Teacher Training in Hungary', in B. Moon, V. Lazar, L. C. Barrows, (Eds.) *Studies on Higher Education Institutional Approaches to Teacher Education within Higher Education in Europe: Current Models and New Developments* (online), UNESCO, http://www.cepes.ro/publications/pdf/teacher.pdf (accessed May 25 2008).

Denzin, N. K., and Lincoln, Y. S. (2005) 'Introduction: The discipline and practice of qualitative research', in N. K. Denzin and Y. S. Lincoln (Eds.) *The Sage Handbook of Qualitative Research* (3rd ed.), pp. 1 - 33, Thousand Oaks, CA, Sage.

Denzin, N. K., and Lincoln, Y. S. (2005) 'Perspectives in Contention', in N. K. Denzin and Y. S. Lincoln (Eds.) *The Sage Handbook of Qualitative Research* (3rd ed.), pp. 184 - 190, Thousand Oaks, CA, Sage.

Dewey, J. (1910) *How We Think*, Boston, D.C. Heath (online) http://www.archive.org /stream/howwethink000838mbp#page/n19/mode/2up (accessed 23 February 2008).

Dewey, J. (1933) *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process,* Boston, D.C. Heath.

Donmoyer, R. (2000) 'Generalisability and the single-case study', in R. Gomm, M. Hammersley and P. Foster, (Eds.) *Case Study Method: Key Issues, Key Texts*, London, Sage.

Dunn, T. G. and Shriner, C. (1999) 'Deliberate practice in teaching: what teachers do for self-improvement', *Teaching and Teacher Education*, vol. 15, no. 6, pp. 631 – 651.

Elbaz, F. (1981) 'The teacher's "practical knowledge": Report of a case study', *Curriculum Inquiry*, vol. 77, no. 1, pp. 43-71.

Elbaz, F. (1993) 'The development of knowledge in teaching: What we can learn from the expert, the novice, and the "experienced" teacher?', in F. Elbaz, L. Kremer-Hayon, H. Vonk and R. Fessler, (Eds.) *Teacher professional development: A multiple perspective approach*, Amsterdam, Zwets and Zeitlinger.

Eraut, M. (1994) *Developing Professional Knowledge and Competence*, Oxford, Routledge.

Eraut, M. (2000) 'Non-formal learning and tacit knowledge in professional work', *British Journal of Educational Psychology*, vol. 70, no. 1, pp. 113–136.

Ericsson, K. A., Krampe, R. T. and Tesch-Roemer, C. (1993) 'The role of deliberate practice in the acquisition of expert performance', *Psychological Review*, vol. 100, no. 3, pp. 363-406.

Ericsson, K. A. and Simon, H. A. (1980) 'Verbal Reports as Data', *Psychological Review*, vol. 87, no. 3, pp. 215-251.

Ericsson, K. A. and Lehmann A. C. (1996) 'Expert and exceptional performance: Evidence on maximal adaptations on task constraints', *Annual Review of Psychology,* vol. 47, pp. 273-305.

Feiman-Nemser, S. and Beasley, K. (1997) 'Mentoring as assisted performance: A case of co-planning', in V. Richardson, (Ed.) *Constructivist Teacher Education*, Bristol PA, Falmer Press.

Flavell, J. (1979) 'Metacognition and Cognitive Monitoring', *American Psychologist*, vol. 34, no. 10, pp. 906–911.

Flyvbjerg, B. (2006) 'Five Misunderstandings about Case-Study Research', *Qualitative Inquiry*, vol. 12, no. 2, pp. 219-245.

Freeman, D. (1996) 'Renaming experience/reconstructing practice: Developing new understandings of teaching', in D. Freeman and J. Richards, (Eds.) *Teacher Learning in Language Teaching*, Cambridge, Cambridge University Press.

Gage, N.L. (1989) 'The paradigm wars and their aftermath: A "historical" sketch of research on teaching since 1989', *Educational Researcher*, vol. 18, no. 7, pp. 4-10.

Gick, M. L. and Holyoak, K. J. (1980) 'Analogical Problem Solving', *Cognitive Psychology*, vol. 12, pp. 306-355.

Glaser, R. (1999) 'Expert knowledge and processes of thinking', in R. McCormick and C. Paechter, (Eds.) *Learning and Knowledge*, London, Sage.

Gomm, R., Hammersley, M. and Foster, P. (2000) 'Case study and Generalization', in R. Gomm, M. Hammersley and P. Foster, (Eds.) *Case Study Method: Key Issues, Key Texts*, London, Sage.

Gonzalez, L. and Carter, K. (1996) 'Correspondence in cooperating teachers' and student teachers' interpretations of classroom events', *Teaching and Teacher Education*, vol. 12, no. 1, pp. 39-47.

Greenwood, J. (1993) 'Reflective practice: a critique of the work of Argyris and Schön', *Journal of Advanced Nursing*, vol. 18, no. 8, pp. 1183-1187.

Griffiths, M. and Tann, S. (1992) 'Using reflective practice to link personal and public theories', *Journal of Education for Teaching,* vol. 18, no. 1, pp. 69 – 84.

Hammersley, M. (2007) *Educational Research and Evidence-based Practice*, in association with the Open University, London, Sage.

Hammersley, M., Foster, P. and Gomm, R. (2000) 'Case study and theory', in R. Gomm, M. Hammersley and P. Foster, (Eds.) *Case Study Method: Key Issues, Key Texts*, London, Sage.

Hammersley, M. and Gomm, R. (2000) 'Introduction', in R. Gomm, M. Hammersley and P. Foster, (Eds.) *Case Study Method: Key Issues, Key Texts*, London, Sage.

Hargreaves, J. (2004) 'So how do you feel about that? Assessing reflective practice', *Nurse Education Today*, vol. 24, no. 3, pp. 196–201.

Harrison, J., Lawson, L. and Wortley, A. (2005) 'Facilitating the professional learning of new teachers through critical reflection on practice during mentoring meetings', *European Journal of Teacher Education*, vol. 28, no. 3, pp. 267–292.

Hartman, J. (2001) 'Developing students' metacognitive knowledge and skills', in J. Hartman, (Ed.) *Metacognition in learning and instruction: Theory, research and practice*, Dordrecht, Kluwer Academic Publishers.

Hatano, G. (1996) 'Cognitive development and the acquisition of expertise', in E. De Corte and F. E. Weinert, (Eds.) *International Encyclopaedia of Developmental and Instructional Psychology*, New York, Pergamon.

Hatton, N. and Smith, D. (1995) 'Reflection in teacher education: Towards definition and implementation', *Teaching and Teacher Education*, vol. 11, no. 1, pp. 33-49.

Hay, K. E. (1996) 'Legitimate Peripheral Participation, Instructionism, and Constructivism: Whose Situation Is It Anyway', in H. McLellan, (Ed.) *Situated Learning Perspectives*. Englewood Cliffs NJ, Educational Technology Publications.

Hockey, J. (1993) 'Research methods - researching peers and familiar settings', *Research Papers in Education*, vol. 8, no. 2, pp. 199-225.

Hoyle, E. and John, P. (1995) *Professional Knowledge and Professional Practice*, London, Cassell.

Ixer, G. (1999) 'There's no such thing as reflection', *British Journal of Social Work*, vol. 29, no. 4, pp. 513–527.

Jay, J. and Johnson, K. (2002) 'Capturing complexity: a typology of reflective practice for teacher education', *Teaching and Teacher Education*, vol. 18, no. 1, pp. 73-85.

Johnson, P. and Duberley, J. (2000) *Understanding Management Research*, London, Sage.

Kárpáti, A. (2009) 'Teacher training and professional development', in K. Fazekas, J. Köllő, and J. Varga, (Eds.) *Green Book for the renewal of public education in Hungary. Round table for education and child opportunities* (online) Budapest, Government Institute for Strategic Research of Economy and Society, http://oktatas.magyarorszaghol nap.hu/wiki/Green_Book (accessed 24 April, 2010).

Kennedy, J. (1993) 'Meeting the needs of teacher trainees on teaching practice', *ELT Journal,* vol. 47, no. 2, pp. 157-165.

Kerber, Z. (n.d.) 'Teaching and Learning: Concerning Observational Research on School Subjects' (online), Budapest, Hungarian National Institute for Public Education, www.oki.hu/oldal.php?tipus=kiadvany&kod=teaching (accessed September 3, 2006).

King, A. (1991) 'Effects of training in strategic questioning on children's problem-solving performance', *Journal of Educational Psychology*, vol. 83, no. 3, pp. 307-317.

Korthagen, F. A. (2001a) 'A Reflection on Reflection' in F. A. Korthagen, J. Kessels, B. Koster, B. Langerwarf and T. Wubbels, (Eds.) *Linking practice and theory: The pedagogy of realistic teacher education*, Mahwah NJ, Lawrence Erlbaum Associates.

Korthagen, F. A. (2001b) 'Specific Instruments and Techniques for Promoting Reflection' in F. A. Korthagen, J. Kessels, B. Koster, B. Langerwarf and T. Wubbels, (Eds.) *Linking practice and theory: The pedagogy of realistic teacher education*, Mahwah NJ, Lawrence Erlbaum Associates.

Korthagen, F. A. J. and Kessels, J. P. A. M. (1999) 'Linking Theory and Practice: Changing the Pedagogy of Teacher Education', *Educational Researcher*, vol. 28, no. 4, pp. 4-17.

Korthagen, F. A. and Wubbels, T. (1995) 'Characteristics of reflective practitioners: Towards an operationalisation of the concept of reflection', *Teachers and Teaching*, vol. 1, no. 1, pp. 51 -72.

Kullman, J. (1998) 'Mentoring and the development of reflective practice: concepts and context', *System*, vol. 26, no. 4, pp. 471-484.

Lave, J. and Wenger, E. (1991) *Situated Learning. Legitimate Peripheral Participation*, Cambridge, University of Cambridge.

Lee, H. J. (2005) 'Understanding and assessing preservice teachers' reflective thinking', *Teaching and Teacher Education*, vol. 21, no. 6, pp. 699-715.

Le Gallais, T. (2003) 'From Native to Stranger...and back again? Reflections of an inside out researcher!' BERA National Conference, Heriot Watt University, Edinburgh, http://www.leeds.ac.uk/educol/documents/00003363.doc (accessed 3 December 2006).

Leinhardt, G. (1992) 'What research on learning tells us about teaching', *Educational Leadership*, vol. 49, no. 7, pp. 20-25.

Leindhardt, G and Greeno, J. (1986) 'The Cognitive Skill of Teaching', *Journal of Educational Psychology*, vol. 78, no. 2, pp. 75-95.

Lesgold, A., Rubinson, H., Feltovitch, P., Glaser, R., Klopfer, D., and Wang, Y. (1988) 'Expertise in a complex skill: Diagnosing x-ray pictures', in M. T. H. Chi, R. Glaser and M. Farr, (Eds.) *The Nature of Expertise*, Hillsdale NJ, Erlbaum.

Lim, J., Reiser, R. A. and Olina, Z. (2009) 'The effects of part-task and whole-task instructional approaches on acquisition and transfer of a complex cognitive skill', *Educational Technology Research and Development*, vol. 51, no. 1, pp. 61 – 77.

Lincoln, Y. S. and Guba, E. G. (2000) 'The only generalisation is: There is no generalisation', in R. Gomm, M. Hammersley and P. Foster, (Eds.) *Case Study Method: Key Issues, Key Texts*, London, Sage.

Loughran, J. (1996) *Developing Reflective Practice: Learning about Teaching and Learning through Modelling*, London, Falmer Press.

Loughran, J., Mitchell, I. and Mitchell, J. (2003) 'Attempting to document teachers' professional knowledge', *Qualitative Studies in Education.* vol. 16, no. 6, pp. 853-873.

Mackintosh, C. (1998) 'Reflection: a flawed strategy for the nursing profession', *Nurse Education Today*, vol. 18, no. 7, pp. 553-557.

Magnuczné Godó, A. (2000) 'Integrating the idea of reflective practice into Hungarian teacher education: Thoughts about jazz and teaching', *Novelty,* vol. 7, no. 1, pp. 51-65.

Malderez, A. (2003) 'Observation', *ELT Journal*, vol. 57, no. 2, pp. 179-181.

Marcos, J. J. M. and Tillema, H. (2006) 'Studying studies on teacher reflection and action: An appraisal of research contributions', *Educational Research Review,* vol. 1, no. 2, pp. 112–132.

Mayer, R. E. (1996) 'Development of learning skills in problem-solving and thinking' in E. De Corte and F. E. Weinert, (Eds.) *International Encyclopaedia of Developmental and Instructional Psychology*, New York, Pergamon.

McAlpine, C., Weston, C., Beauchamp, J., Wiseman, C. and Beauchamp, C. (1999) 'Building a metacognitive model of reflection' *Higher Education*, vol. 37, no. 2, pp. 105-131.

Ministry of Education (2008) 'Higher Education Act' (online), Budapest, Ministry of Education and Culture of the Republic of Hungary, http://planipolis.iiep.unesco.org/upload/Hungary/Hungary_HE_Act_139_2008.pdf (accessed 14 July, 2009).

Moon, J. A. (2000) *Reflection in learning and professional development: Theory and practice*, London, Kogan Page.

Munby, H. and Russell, T. (1990) 'Metaphor in the study of teachers' professional knowledge', *Theory into Practice*, vol. 29, no. 2, pp. 116-121.

Nickerson, R. S. (2004) 'Teaching Reasoning', in J. P. Leighton and R. J. Sternberg, (Eds.) *The Nature of Reasoning*, Cambridge, Cambridge University Press.

Nisbet, J. and Shucksmith, J. (1984) *Learning Strategies*, London, Routledge.

Nunan, D. (1995) *Research Methods in Language Learning*, Cambridge, Cambridge University Press.

Pajares, M. F. (1992) 'Teacher's beliefs and educational research: Cleaning up a messy construct', *Review of Educational Research*, vol. 62, no. 3, pp. 307-322.

Palincsar, A. S. (1998) 'Social constructivist perspective on teaching and learning', *Annual Review of Psychology*, vol. 49, no. 1, pp. 345-375.

Penso, S., Shoham. E., and Shiloah, N. (2001) 'First Steps in Novice Teachers' Reflective Activity', *Teacher Development,* vol. 5, no. 3, pp. 323–337.

Peterson, P. L. and Comeaux, M. A. (1987) 'Teachers' schemata for classroom events: The mental scaffolding of teachers' thinking during classroom instruction', *Teaching and Teacher Education*, vol. 3, no. 4, pp. 319-331.

Piaget, J. (1955) *The Construction of Reality in the Child*, London, Routledge and Kegan Paul.

Pinter, A. (2006) *Teaching Young Language Learners,* Oxford, Oxford University Press.

Pollard, A. (1997) *Reflective Teaching in the Primary School*, London, Cassell Education.

Popkewitz, T. (2000) *Paradigms and Ideology in Educational Research*, Lewes, Falmer Press.

Porter, P. A., Goldstein, L., Leathermann, J. and Conrad, S. (1995) 'An ongoing dialogue: Learning logs for teacher preparation', in J. Richards and D. Nunan, (Eds.) *Second Language Teacher Education*, Cambridge, Cambridge University Press.

Putnam, R. T. and Borko, H. (2000) 'What do new views of knowledge and thinking have to say about research on teacher learning?', *Educational Researcher*, vol. 29, no. 1, no. 4-15.

Radó, P. (2001) *Transition in Education*, (online) Budapest, Institute for Education Policy, http://www.osi.hu/iep/papers/transit.pdf (accessed 13 October, 2008).

Richards, J. and Lockhart, C. (1994) *Reflective Teaching in Second Language Classrooms*, Cambridge, Cambridge University Press.

Ross, D. (1989) 'First steps in developing a reflective approach', *Journal of Teacher Education*, vol. 40, no. 2, pp. 22-30.

Rubin, H, J. and Rubin I, S. (1995) *Qualitative interviewing: The art of hearing data,* Thousand Oaks, CA: Sage Publications.

Sabers, D., Cushing, K. and Berliner, D. C. (1991) 'Differences among teachers in a task characterized by simultaneity, multidimensionality and immediacy', *American Educational Research Journal*, vol. 28, no. 1, pp. 63-88.

Schempp, P. G., Manross, D., Tan, S. and Fincher, M. (1998) 'Subject expertise and teachers' knowledge', *Journal of Teaching in Physical Education*, vol. 17, no. 3, pp. 342-256.

Schofield, J. W. (2007) 'Increasing the generalisability of qualitative research' in M. Hammersley, (Ed.) *Educational research and evidence-based practice*, Thousand Oaks, Sage.

Schön, D. (1983) *How Professionals Think in Action*, New York, Basic Books.

Schön, D. (1987) *Educating the Reflective Practitioner: Toward a New Design for Teaching and Learning in the Professions*, San Francisco, Jossey-Bass.

Seale, C. (1999) *The Quality of Qualitative Research*, London, Sage.

Shulman, L. (1987) 'Knowledge and Teaching: Foundations of the New Reform', *Harvard Educational Review*, vol. 57, no. 1, pp. 1-22.

Simons, P. R. J. (1996) 'Metacognition', in E. De Corte and F. E. Weinert, (Eds.) *International Encyclopaedia of Developmental and Instructional Psychology*, New York, Pergamon.

Stake, R, E. (2005) 'Qualitative case studies' in N. Denzin and Y. Lincoln, (Eds.) *The SAGE Handbook of Qualitative Research* (3rd edn), London, Sage.

Strauss, A. and Corbin, J. (1998, 2nd edn) *Basics of qualitative research: Techniques and procedures for developing grounded theory,* London, Sage.

Sternberg, R. J. (2001) 'Metacognition, abilities, and developing expertise: What makes an expert student?', in H. J. Hartman, (Ed.) *Metacognition in learning and instruction: Theory, research and practice*, Boston, Kluwer Academic Publishers.

Swann, P. and Pratt, J. (2003). 'Why you should read this book', in J. Swann and J. Pratt (Eds.), *Educational research in practice: Making sense of methodology*, London, Continuum.

Swanson, H. L., O'Connor, J. and Cooney, J. (1990) 'An information processing analysis of expert and novice teachers' problem solving', *American Educational Research Journal*, vol. 27, no. 3, pp. 533-556.

Tickle, L. (2000) *Teacher Induction*, Milton Keynes, Open University Press.

Tomlinson, P. (1996) *Understanding Mentoring*, Buckingham, Open University Press.

Tomlinson, P. (1999a) 'Conscious Reflection and Implicit Learning in Teacher Preparation. Part I: recent light on an old issue', *Oxford Review of Education*, vol. 25, no. 3, pp. 405-424.

Tomlinson, P. (1999b) 'Teacher education and psychologies of skill', in D. Shorrocks-Taylor, (Ed.) *Directions in Educational Psychology*, London, Wharr Publisher.

Tripp, S. (1996) `Theories, Traditions, and Situated Learning', in H. McLellan, (Ed.) *Situated Learning Perspectives*, Englewood Cliffs NJ, Educational Technology Publications.

Tunmer, W.E., Prochnow, J.E., and Chapman, J.W. (2003) 'Science in educational research', in J. Swann and J. Pratt (Eds.), *Educational research in practice: Making sense of methodology*, London, Continuum.

Ur, P. (1992) 'Teacher Learning', *ELT Journal*, vol. 46, no. 1, pp. 56 – 61.

VanLehn, K. (1996) 'Cognitive skill acquisition', *Annual Review of Psychology*, vol. 47, pp. 513–539.

Van Manen, M. (1977) 'Linking Ways of Knowing to Ways of Being Practical', *Curriculum Inquiry*, vol. 6, no. 3, pp. 205-228.

Van Manen, M. (1991) *The Tact of Teaching. The Meaning of Pedagogical Thoughtfulness*, New York, SUNY Press.

Van Manen, M. (1995) 'On the Epistemology of Reflective Practice', *Teachers and Teaching: theory and practice*, vol. 1, no. 1, pp. 33-50.

Voss, J. F., Tyler, S. W. and Yengo, L. A. (1983) 'Individual differences in the solving of social science problems', in R. F. Dillon and R. R. Schmeck, (Eds.) *Individual differences in cognition*, New York, Academic Press.

Vygotsky, L. (1978) *Mind in Society: The Development of Higher Psychological Processes*, London, Harvard University Press.

Ward, J., and McCotter, S. (2004) 'Reflection as a visible outcome for pre-service teachers', *Teaching and Teacher Education*, vol. 20, no. 3, pp. 243-257.

Wood, D., Bruner, J. and Ross, G. (1976) 'The role of tutoring in problem solving', *Journal of Child Psychology and Psychiatry*, vol. 17, no. 2, pp. 89-100.

Wurmbrandt, A. (2010) 'Ki mit vár a 2010–es esztendőtől' ('Who can expect what from 2010'), *Győri hét*, 13 January.

Yin, R. (2003, 3rd edn) *Case Study Research: Design and Methods*, Newbury Park, Sage.

Yost, D., Sentner, S. and Forlenza-Bailey, A. (2000) 'An Examination of the Construct of Critical Reflection: Implications for Teacher Education Programming in the 21st Century', *Journal of Teacher Education*, vol. 51, no. 1, pp. 39-49.

Zeichner, K. M. and Liston, D. P. (1987) 'Teaching student teachers to reflect', *Harvard Educational Review*, vol. 57, no. 1, pp. 1–22.

Zeichner, K. M. and Liston, D. P. (1996) *Reflective teaching: An introduction*, NJ, Lawrence Erlbaum and Associates.

Zeitz, C. M. (1994) 'Expert–novice differences in memory, abstraction, and reasoning in the domain of literature', *Cognition and Instruction*, vol. 12, no. 4, pp. 277–312.

Zeitz, C. M. and Glaser, R. (1996) 'Expert knowledge and performance', in E. De Corte and F. E. Weinert, (Eds.) *International Encyclopaedia of Developmental and Instructional Psychology*, New York, Pergamon.

APPENDICES

Appendix 1

Common European Framework of Reference for Languages

This table represents the six reference levels of the Common European Framework of Reference for languages, produced by the Council of Europe. The level system applies to all European languages and describes the language competence of any individual in any language.

Proficient User	C2	Can understand with ease virtually everything heard or read. Can summarise information from different spoken and written sources, reconstructing arguments and accounts in a coherent presentation. Can express him/herself spontaneously, very fluently and precisely, differentiating finer shades of meaning even in more complex situations.
	C1	Can understand a wide range of demanding, longer texts, and recognise implicit meaning. Can express him/herself fluently and spontaneously without much obvious searching for expressions. Can use language flexibly and effectively for social, academic and professional purposes. Can produce clear, well-structured, detailed text on complex subjects, showing controlled use of organisational patterns, connectors and cohesive devices.
Independent User	B2	Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.
	B1	Can understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc. Can deal with most situations likely to arise whilst travelling in an area where the language is spoken. Can produce simple connected text on topics which are familiar or of personal interest. Can describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans.
Basic User	A2	Can understand sentences and frequently used expressions related to areas of most immediate relevance (e.g. very basic personal and family information, shopping, local geography, employment). Can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar and routine matters. Can describe in simple terms aspects of his/her background, immediate environment and matters in areas of immediate need.
	A1	Can understand and use familiar everyday expressions and very basic phrases aimed at the satisfaction of needs of a concrete type. Can introduce him/herself and others and can ask and answer questions about personal details such as where he/she lives, people he/she knows and things he/she has. Can interact in a simple way provided the other person talks slowly and clearly and is prepared to help.

Appendix 2

Interview protocols

The core questions asked during post-lesson Interview 1, post-lesson Interview 2 and the co-planning interview included the following.

Post-lesson Interview 1

Talking about the lesson

1. Can you talk me through the lesson?
2. How do you feel it went?
3. What was your overall aim / aim with this task?
4. Why.....? / Why did you....?
5. What was the most important thing in the lesson for you?
6. What would you do differently if you taught the lesson again?
7. How did you plan this lesson?

Talking about teaching

8. What do you do if something doesn't work?
9. What helps you learn about teaching / Where do you learn new ideas from?
10. What is your biggest problem in teaching English?
11. Do you teach English and Hungarian subjects in the same way?
12. How do you see yourself as a teacher?

Post-lesson Interview 2

In post-lesson Interview 2, the following questions were asked in addition to those asked in post-lesson Interview 1.

Talking about the lesson

1. Did the lesson change from your plan? How? Why?

Talking about teaching

2. What differences were there between talking before and after the lesson?
3. Which discussion was more interesting, useful, easier?
4. Which discussion would be more useful for a beginner teacher?"
5. Has talking about your teaching helped you?
6. Have you learnt anything? / What is the most important thing you have learned?
7. Has this experience changed how you teach other subjects?

Co planning Interview

Co-planning interviews included a far wider range of questions than the post-lesson interviews. These questions could be accommodated into three categories according to information the questions aimed to elicit. The questions included the following.

Teaching context

1. What are the children like? How old are they? What is their level?
2. What do you have to do by the end of the year? What was the last topic? The next topic? What's in the syllabus? The course book? How many lessons does this topic last?
3. When will you teach this lesson?
4. What materials have you got?

Lesson content

5. What are you going to do?
6. What do you want pupils to achieve by the end of the lesson?
7. What's the aim of this activity?
8. What will pupils actually have to do during this activity? / Can you explain in more detail?
9. How can you do this? / What activity might be useful here? / Do you know any games for this? / What other ways can this be done?
10. We have two or three possible activities here. Which is better for this lesson?

Reflecting on the planning process

11. How did you decide what to teach?
12. Talk me through the steps we have planned.
13. How did you decide how to build up the steps of the lesson?
14. What problems might there be?"
15. Which part will be most challenging / important for the pupils? For you? / Which bit are you most worried about?
16. Is there anything that we have planned that's new for you?
17. You have decided to...*translate the dialogue*.... What's good and bad about this?
18. Is planning with me different from what you normally do?

Appendix 3

Question prompts for diary writing

Diary 1 (following post-lesson Interview 1)

1. What happened in the lesson?
2. What were the strengths and weaknesses?
3. What was the most important thing in the lesson for you? Why?
4. What would you do differently if you taught the lesson again?
5. How did you feel about talking about your lesson with someone?
6. What do you normally do after you have taught a lesson?

Diary 2 (following co-planning interview)

1. What problems may happen in the lesson?
2. Name one thing from the conversation that was important to you?
3. What did you learn from co-planning?
4. How do you normally plan a lesson?
5. What problems do you have with planning an English lesson?

Diary 3 (following post-lesson Interview 1)

1. What happened in the lesson?
2. What were the strengths and weaknesses?
3. What was the most important thing in the lesson for you?
4. What would you do differently if you taught this lesson again?
5. How did the lesson change from your plan?
6. We had three conversations: post-lesson Interview 1; co-planning interview; post-lesson Interview 2. Which conversation was the:

   ~ Most interesting?

~ Most useful?

~ Most difficult? Why?

7. Where do you learn about teaching?

8. What can help beginner teachers learn about teaching?

9. How do you see yourself as a teacher?

Appendix 4

Examples of transcription and coding of interview data

4.a Transcription of post-lesson Interview 1

Interview with an experienced teacher (Csilla) following her first lesson observation.

I. Interview

T. Teacher

I. Can you talk me through the lesson? How do you feel it went?

T. Well, at the beginning we started with general questions and after the weekend it's quite good and it's quite difficult for them to acclimatize and it helps to start English. And...er...then came the hangman game...the letters on the board game and although we do it quite often, I don't...didn't mind it, because spelling is quite difficult sometimes for them and even in this year 5 they mix up "I"... "E" and these kinds of letters and how to pronounce it. And this is one good way how to start the lesson and how to give the topic we'll talk about afterwards. And because later on we wanted to do some kind of shopping practice, that is why I chose a souvenir shop also because it was a way how to connect a shopping conversation with postcard writing. And then, I didn't know exactly what vocabulary they knew or *not* because I didn't teach them last year and ..... And that is why I...erm....I just elicited their knowledge about the objects and the names they know. And I think there were just two unknown words, the badge and the mug they didn't know, but all the other objects they knew already. And.... erm... I also used it because it was an easy way to connect the prices with these objects. And I also didn't know about their knowledge how to read out the

prices. But most of them knew it quite well so I was very happy about it because I didn't know how much time we had or we would have to spend on it, but it went quite OK. The difficulty was maybe when they had to make differences between *one* pound or two pound*s*. But some of them did it also well. And I was happy because they knew the meaning of "p", so they were familiar with it. And...er...after....

I. ...I thought they were quite good actually, they were quite a strong group.

T. Yes. ...but not always I think they can be...

I. ....they understood almost everything.....

T. .....yeah, yeah....exactly, and exactly. Because I didn't teach them or I haven't taught them very new things so far because as I mentioned we have just had two lessons earlier.

I. Yeah, yeah.

T. Then I just wanted to practise a few more prices so we read out some of them. And I wanted them to recognise the price from the cassette. And I know that it was a little bit difficult because I wanted them to recognise just the *final* price and unfortunately the conversation maybe was a little bit difficult for them, but some of them got it. And for the second time, I think most of them got either the price or the objects and the shop. And after the listening which I did with conversation and I went through and filled in the gaps, cos....erm ....this was the task they had to do later and I wanted to model them *how* to do and *what* to say and *this* is a good way if you not sure about them and I didn't know exactly what they had learnt before. And they were good because they understood most of the things. And when I circled the plurals they understood what it was the point and why to use singular or plural, although when they filled in the gaps,

then they sometimes forgot about it. I think they were quite creative to change the things they had to buy or that they bought. And just one pair copied mine...

(Both laugh)

.....But they didn't copy it, they also wanted to buy the similar things but when they looked at *my* version on the blackboard they changed it a little bit. And we did with choral repetition as well....you know...I think pronunciation is important...and....er....we can return back to this task again and we will a little bit improve their pronunciation because "expensive" and some expressions were not so good when they read out the conversations and they weren't so sure of the words so originally I wanted to give them more tasks so to concentrate on when they listen to each other so I prepared a little sheet. But I looked at my watch I saw that we didn't have too much time but we will continue and the ones who haven't read the conversation, when they will read it out then the others will get these little sheet and they have to write down what are the things they will buy...

I. ...Right....

T. ...and the exact price of each one.....

I. .....OK.....so it's like a listening.....

T. .....yes, yes listening and... er... maybe in this way, the task it's easier to concentrate on each other's conversation..... it's always a problem when the number of the group is quite big, when we listen to each other they don't really want to, even if you give them a thing to focus on, if it's just a very little one then they won't do it. But if they've got a worksheet then it's easier to make them *listen* to. And that is why I would like to do it in this way next time. But, I didn't want to leave out the postcard writing. They met a postcard in their books so they saw the example and when we are going to write a test the postcard writing will be involved as well.....

I. Right, OK.

T. .....so we had to practise it again. And...er...I think it's always very important to collect some ideas. Because...er...if I give an example and I leave it there I mean my version, they sometimes just copy mine. So that is why we collected other expressions to the gaps and then they can choose and they can find out their own version. And then they drew a postcard....And drawing a picture of a place where they are, it's also good because maybe the whole task is more memorable in this way.

I. Do you think so? Why?

T. Because I think, er...children like drawing at this age and if they got a picture in their minds then easier to remember the vocabulary and grammar because they remember "Wow, yes" for example when they go to Hawaii, in their mind, in their dreams.....in my opinion, it is easier.

I. Yeah, OK, yeah. I just thought.....I really enjoyed being here.

T. (laughs) Oh thank you. It wasn't so excellent.....

I. .....Yes. I think so. Everything was so smooth everything was just so clear everything built up to everything else.

T. Thank you, thank you. It wasn't so nice but.....

I. A pleasure to watch yes, yes.

T. Thank you.

I. What was the...er...you...were happy with how it went? Did you think it was successful....for you?

T. Well, at the beginning I would say, yes. The part that I didn't like so much, it was the conversation when they listened to each other and they didn't really listen. But as I told you, I prepared a little task and because of the time I missed it. But in that way I think it would have been more successful.

I. If I hadn't been here, would you have given them the written task?

T. Yes, probably I would have left out the postcard now...

I. ....right, right....

T. ....and maybe would have worked on this topic.....

I. Yes.....

T. ....a little bit more. And probably then there is another exercise in their

100 workbook about the prices, so maybe I would have spent a bit more time on it because there is also the written form.... how to write down....

I. .....right, OK.....

T. So maybe a little more practice.... I would have involved.

I. Yes, yes. What was your overall aim do you think for the lesson? What was your main aim?

T. My main aim was.....

I. .....or aims.....

T. .....yes, I would say aims because not just one. First of all, I wanted to develop their speaking and listening so a little bit skills development, I wanted to do

110 first of all, I mean skills. And the other thing was to practise a little bit the vocabulary and all the situations that come out of a holiday, so I mean the names of the souvenirs and the prices which is quite important to know when they go abroad. And they were good because some of them were quite realistic when *they* tried to give a price to an object. And it's always difficult for them because the forint and the pound is totally different. And sometimes they think that "Wow! It's very cheap". And that thing isn't so cheap...they are little children but it's also important to feel what we mean cheap and expensive when we talk about pounds because the values are different and it's a good way to talk about the different cultures too because, you know Britain is a little bit richer and ..er...

I. ...yeah. yes, yes I...erm...I noticed actually you got them to divide sums like "What's half of one pound ninety nine?" I think it was. "If she buys two of them..."

T. Yes, yes, yes.

I. Why did you do that?

T. I wanted to highlight also the meaning of "altogether" and I wanted them to use the numbers and work with numbers in English as well and think harder with the maths and English together....er.....

I. Did you plan that or did you think of it on the spot?

T. Well, I didn't really *plan* it in that way, because I didn't know what kind of price they would say. When they give for example two pounds then its quite obvious one *pound.*

I. .....yes.....

T. But it was one pound ninety-eight...

I. .....yes.....

T. .....and in this case I think it's quite a tricky because.....

(both laugh)

T. .....because maybe not all of them understood that it was two and not just one.

I. OK.

T. And so a kind of comprehension of the text.

I. Right, OK. Now you just described your lesson to me non-stop, very accurately.

(both laugh)

I. How can you remember this when you....do you see the lesson in front of you? Or do you see your lesson plan or....?

T. No. Not my lesson plan

I. How do you....?

T. The blackboard, my desk and the children. (4 second pause). So not my lesson plan I...I...don't...no. I see it.....

I. .....you're visualizing....

T. ....the lesson....yes.....

I. ....like a video?

T. Yes. So not the plan itself.

(both laugh)

I. No....different people do it in different ways.

T. Really?

I. Yes.

T. No I visualize the lesson just like a video, yes you are right. So I can see myself standing here and standing there. I can see the children reaction and I can see when they chatting about something else. So yes you are right. Just like a video.

I. Another teacher said this. It wasn't my idea.

T. It's a very good summary of the feeling. Yes.

I. The interesting thing is that beginner teachers do it from their lesson plan whereas some teachers like you can replay this video in their heads.

T. Yes, exactly.

I. I don't know what it means.

T. I think it's because they always want to follow their lesson plans and they are a little bit nervous whether they leave out something or not and I think that is why they memorize the lesson plan.....

I. .....yes.....

T. .....very, very accurately and that is why the first thing they remember is the plan itself.

I. Yeah, yeah. I was probably the same actually when I started. I think many years ago.

T. I can't remember either because I started teaching Russian.

I. Did you really?

T. Yes.

(Both laugh)

T. .....and it was so long ago that I can't remember

I. OK. Right. What was the most important thing in the lesson for you?

T. The most important thing was, I mean on the side of the pupils or...was asking them.....

I. OK.....

T. .....and....asking the questions for the postcard because you know.....and 'What is your favourite and de..de..de...?" and although I know that maybe some children get a little bit more role when I ask questions that they are quicker and they answer a little bit more....but I think that the others can *learn* from it....and all the others try to do something and the pair work is very good for it.....and....er....when they work individually on a postcard and everybody is involved. And on the other side it was also very important to teach them the prices and how to do a shopping.... a shop....and how to write a post card. So these things were my focus, or I was focusing on.

I. What would you do differently if you taught the lesson again and why?

T. Well as I told you that little thing obviously and...er....maybe of course I know that I was in a hurry so there was another little problem that yesterday I realised that I didn't have more big sheets at home and that is why my card was a little bit smaller ..... But it caused a problem because you know when I collected the words you know the lines were very close to each other and it was very

difficult for the children to realise which line goes in which place....so a bigger sheet was needed but I didn't have.

I. Ah. OK. OK.

T. So that was definitely the things I would have changed.

I. Right. OK. How did you plan this lesson?

T. What do you mean by that?

200 I. What did you do?

T. OK. So first I checked the material in the book. And then I thought over what I wanted to do in this lesson. And then I collected some ideas for myself and then

I put them together and then I tried to judge the time I would need for each of the tasks I wanted to do.

I. Do you start from what are fun activities, or do you start from what you want children to learn? Or how do you decide what to include?

T. So first what I want them to *learn.* That is the first thing that I focus on and for this purposes I try to find the tasks and the activities and the exercises. I looked at the book and then I started to think about how can I start to join the previous

210 lesson with this lesson. Then ....the basic skill I would like to develop.....

I. OK, OK, OK. What do you do in general if something doesn't work?

T. It depends on, because if I see that they don't understand what the task is then I will use more ideas of course then I more time, then I try to explain them in another way what the task is. But when they are absolutely lost, then I change the language and I use the mother tongue as well.

I. In the class or in the next time you teach?

T. Sorry, sorry, I thought you ask generally.

I. In general, yes.

T. Yes, yes. So in the classroom so I realise something they don't understand and they are staring at me and they don't start the task I want them to start then I do this so.

I. I noticed you did that actually because you said "Listen....." There was something with the plurals and you got then all to look at you.

T. Yes, yes. Then I was monitoring yes. So when I feel even in the middle of the task that something is going wrong, then I stop and I give another action. Although it is sometimes quite difficult because they are so involved it is very difficult to get their attention. But when I realise in more places, then I think it's useful.....

I. .....Yeah, yeah.....

T. .....because then they can change it and they can read it out and maybe fewer mistakes we will find.

I. And how about if you do a lesson which is rubbish?

(both laugh)

I. ....and it goes disastrously...it doesn't work out....what do you do then?

T. After the lesson? After the lesson I think over the lesson again and I try to find out the...what was wrong and how I could've changed the things, maybe the instructions, the motivation and maybe how. If I think it was rubbish because was too difficult for them then how I could simplify the task or maybe the instructions and maybe how I could put the things into smaller bits.

I. Right. Has it ever happened that you haven't found the problem, that you haven't worked out why something goes badly?

T. Well, of course I think it happened sometimes but then I feel that I can't.....Exactly I *know* the reason but I don't know how to change it and you know this is a difficult class. There are some pupils who are *absolutely* are *not*

interested in studying English and among the 20 there are about 3 or 4 of them I think you saw. And I have tried different things and Gabi too. But the only thing that worked with them, is when they have to create something in groups. Then they are really interested in. However if we do these kinds of things all the time then they don't learn the material they *should* by the end of the school year. And this is a very difficult thing because whenever we do something else or when they have to work individually, when they have to read or write they absolutely not interested in.

I. Why not?

T. Because the other problem is, that these children are absolutely bad concerning other subjects as well. And I think English is a little bit over their head. Because there is a lot of children together and there are better ones. Very, very difficult to work with them because they always feel that the others are much better and lately because of the new policy I don't think I have so much time to prepare for them special tasks as I had before because...erm...

I. Which new policy?

T. I mean we have to write a lot of paper work.

I. Oh. OK. Sorry.

T. And that is why it takes so much time from my life and I know that I don't have so much time for my lessons as I used to have. And I feel absolutely sad and I'm not very happy about it. But 24 hours is just 24 hours and I can't make it 48 or something like that.

I. What paperwork do you have to do?

T. You know just write the curriculum and the lesson the "tanmenet" *(local curricular)* the local things the local documents.....

I. .....local curricular.....

270 T. .....and we have to write a lot of things reports and the school is involved in a lot of projects and we have to translate a lot of things. And when you do it until 3 o'clock in the morning then you won't have time to prepare for your lessons so enthusiastically than earlier. So I can say that this term and the last are the worst in my teacher's life in that way.

I. Just so much administration.

T. Yes, yes. And I fear that I don't have so much time for my lessons which in my opinion would be the most important things and not administration.

I. Yeah, yeah. What helps you learn about teaching?

T. I think - you mean for myself? When I teach?

280 I. Do you develop as a teacher do you....?

T. ....I try to attend different teacher trainings and meetings and sometimes you can pick up new ideas and when we...er...just...we talk, I talk to the children. Sometimes I feel that "Mmmm maybe they enjoyed it" and then when I feel that it's a good way to do it more often, then I do it more often because if they enjoy something, probably they are more involved and learn more from it, if it is a thing which is possible maybe doing it more regularly.

I. So feedback from the children

T. Yes. It also helps me.

I. OK. What's your biggest problem in teaching English

290 T. My biggest problem, yeah, when I started to teach English then I, the situation was awful because I taught 35 children together. And then things were better because we had just about 12 or just like now in this group. But for me the biggest problem...er...is always the number of the pupils. When there are nearly twenty then I think it's much more difficult to organise the things because then it is much more preparation and then I can't make all of them speak so much just

when we do group work or pair work. But correction is also a little bit more difficult in that way. So number of pupils is the most difficult for me.

(Both laugh)

I. Do you teach Hungarian at all?

T. No, no.

300 I. You haven't taught Hungarian for a long time?

T. Yes.

I. OK. How do you see yourself as a teacher? What metaphor could you use?

T. Well, it's quite interesting question (5 – second pause)....because you mentioned the gardener word and I really liked it.

I. I said "gardener"?

T. Yeah.

I. When?

T. I don't know, maybe you wrote it.

I. Yeah?...Oh.....(short pause)....maybe, maybe.

310 T. I remember it was from you. And in a certain way I think it's a very good...it's a good word for it. Because in a certain way a gardener does a lot of things so lets the plant to grow but when they need help, then helps them and shapes them and forms them and our task is that as well. But I think that human relationships are also important for me as a teacher. So for example I don't like teaching pupils whom I don't know so I like to get to know them even their backgrounds because I think then it's much easier to work with them. And I, I always want them to feel or to think of me as a person who helps them, an older friend as well. It's also important for me. Sometimes it's difficult because you are the teacher and they are the pupils. But when the group is nice it works. And

320 once I had my own class it worked very well and even now they are also they are 28 now but we are really friends now.

I. Right, so it's a gardener but also an uncle or an aunt?

T. Yes, yes, exactly.

I. .....a parent or.....

T. Yes, yes, maybe a combination of this. So this side is very important for me.

I. Yeah, yeah I can see that yes. If you had to think of one incident in the lesson you just taught, just one significant, important incident, what would it be?

T. When the girls started to chat and maybe not listen to the others and..

I. I didn't notice.

330 T. And there is a girl in a pair in front of the boys near you....

I. I thought they were quite good.

T. Yes and...er...I realise that I will have to find out something for the girl....she came from the Vocational Academy and they had 5 lessons per week. So that girl or her knowledge is absolutely higher than the others' knowledge. So probably from the following weeks, maybe after the autumn holidays because before it I don't think I will have time I am thinking of preparing extra material for her and probably she will do some extras because all these things she's quite familiar with. And I see that sometimes she gets bored.

I. And that makes her talk to her neighbour?

340 T. Yes, but her neighbour needs to practice, her knowledge is not so high. But for her maybe these things are maybe a little bit boring. But I think the things she likes when she can act out something and she can be on stage.....because I realise that is the thing she likes....so perhaps something like that is needed.

I. OK. No....I thought they did their dialogue very well.

T. Yes...and.....I think she guided the other girl.

I. Where do you learn new ideas from?

T. Trainings as I mentioned and sometimes book as well because I have methodology books as well and I just look up information.

I. Yeah, me too. Me too. When you try a new idea, you mentioned looking up in methodology books, what do you do with it?

T. I try to think over first of all and I try to adapt because I don't think everything works in that way that is written in the book. Because sometimes I feel that the theory and the practice are quite far from each other and I *also* could write very nice things but in practice they are absolutely different.

I. So you think over the idea and.....

T. ....yes, and I try to change it according to the class needs.

I. OK and then?

T. And then I try it in the lesson when I have changed it a little bit and I compare the original one and my one. But I don't think I have ever tried anything just when just...er... I read.

I. No, me neither, me neither.

T. Because I don't think it's the best idea - for me at least. Maybe for some people it works but for me I don't think so.

I. No you have to match it to the context, I agree

T. Yes....the pupils...time of day.....the school.....

I. .....the facilities that are available.....

T. ....yes, of course.

I. You plan a lesson before you teach it usually..... do you?

T. Well I always try to plan it but when I teach it by myself the plan is in my head most of the time. But I never go in the classroom without preparing so at least I

have checked the things I want to teach and I prepared the cassette and things I need.

I. And do you usually think a lot about it when you've finished or is it just (whistling noise) OK....onto the next one.

T. OK, when I feel that....er.....it's quite OK and most of the things went smoothly then, lately I don't think about it again or I think about it again. But when I feel that something was not so good and something was not going so smoothly, then when I am preparing for the *next* lesson then I think back to the previous one.

I. So, it's a circle for you?

380 T. Yes, but not after the lesson because after the lesson I don't have time because in my head is the following lesson so just when I prepare for the same class lesson at the following one.

I. OK. Thank you very much.

4.b Coding of the interview

This interview was coded in the following way.

1. The interview was divided up into two broad sections of **(a) TALKING ABOUT THE LESSON** and **(b) TALKING ABOUT TEACHING**.

2. These two sections were divided into segments according to the purpose of the interaction. For example the section (a) "Talking about the lesson" contained a segment "Discuss the activities".

3. The contents of the segments were accommodated within five thematic categories: Cognitive skills, Reflection, Teacher Learning, Context, Planning. In the coded interview transcript below, these categories are highlighted in the colour yellow.

4. Within the category "Cognitive Skills", the individual skills used by this teacher (Csilla) to reflect on her lesson events are highlighted in the colour grey.

5. To make explicit how each skill was identified, an explanation is given in brackets and supporting evidence is underlined in the interview transcript. For example,

Cognitive skills

Pedagogic Reasoning: Simple (simple, single reason given to explain decision making) *Then I just wanted to practise a few more prices so we read out some of them* (31)

(a) TALKING ABOUT THE LESSON

Discuss the activities (Int. *Talk me through the lesson*)

- Activity 1: Throw the ball question revision — Cognitive skills

Describing/task.... *we started with general questions* (Line 2)

Commenting: Opinion (expressing view based on general teaching belief) ...*and after the weekend it's quite good and it's quite difficult for them to acclimatize and it helps to start English*. (Lines 3 – 4)

- Activity 2: Hangman — Cognitive skills

Describing/task *And....then came the hangman game* (Line 4)

Commenting: Opinion (expressing opinion on her actions) *and although we do it quite often, I don't...didn't mind it* (Line 5)

Pedagogic Reasoning: Simple (single reason given to explain teaching action, based on her experience) *because spelling is quite difficult sometimes for them* (Line 6)

Commenting: Elaborating (additional information provided about group) *and even in this year 5 they mix up "I", "E" and these kinds of letters and how to pronounce it.* (Line 7)

Pedagogic Reasoning: Intermediate (multiple reasons provided to explain one teaching decision) *And this is one good way (1) how to start the lesson and (2) how to give the topic we'll talk about afterwards. And because later on we wanted to do some kind of shopping practice, that is why I chose a souvenir shop also because it was a way how (3) to connect a shopping conversation with a postcard writing*. (Lines 7 – 11)

- Activities 3 and 4: Vocabulary input — Cognitive skills

Predicting (evidence of estimating pupils' vocabulary knowledge) *I didn't know exactly what vocabulary they knew or not because I didn't teach them last year* (Line 12)

Pedagogic Reasoning: Simple (simple, single reason given to explain her action) *And that is why I...I just elicited their knowledge about the objects and the names they know.* (Line 13 - 14)

Commenting: Elaborating (additional information provided about pupils' knowledge on '*objects and the names they know*') *And I think there were just two unknown words the badge and the mug they didn't know, but all the other objects they knew already.* (Lines 14 - 15)

Pedagogic Reasoning: Simple (simple, single reason given to explain her actions) *I also used it because it was an easy way to connect the prices with these objects* (Line 16 - 17)

Predicting (evidence of estimating pupils' knowledge of *'prices'* + pronunciation skills) *And I also didn't know about their knowledge how to read out the prices* (Line 17)

Evaluating pupils (evidence-based judgement of pupils' performance) *But most of them knew it quite well so I was very happy about it because I didn't know how much time we had or we would have to spend on it, but it went quite OK* (18 – 20)

Evaluating task (evidence-based judgement on task difficulty) (20 - 22) *The difficulty was maybe when they had to make differences between one pound or two pounds. But some of them did it also well. And I was happy because they knew the meaning of "p", so they were familiar with it.* *('Evaluating pupils' included in lines 18 - 20)*

Pedagogic Reasoning: Simple (simple, single reason given to explain her decision) *I haven't taught them very new things so far because as I mentioned we have just had two lessons earlier.* (28 - 29)

Pedagogic Reasoning: Simple (simple, single reason given to explain her decision) *Then I just wanted to practise a few more prices so we read out some of them* (31)

- Activity 5: Listening Cognitive skills

Describing/task ...*And I wanted them to recognise the price from the cassette* (32)

Evaluating task (evidence-based judgement on task difficulty) And *I know that it was a little bit difficult because I wanted them to recognise just the final price and unfortunately the conversation maybe was a little bit difficult for them* (33 - 34)

Evaluating pupils (evidence-based judgement on pupils' performance) *but some of them got it. And for the second time, I think most of them got either the price or the objects and the shop* (35 - 36)

- Activity 6: Highlight the form of the dialogue Cognitive skills

Describing/task *the listening...I went through it and filled in the gaps* (37)

Pedagogic Reasoning: Intermediate (situation perceived as problematic, several reasons given to explain actions including those drawn from pedagogy/learner training) *cos....*

(1) this was the task they had to do later and I wanted to (2) model them ***how*** *to do and* ***what*** *to say and (3) this is a good way if you not sure about them and I didn't know exactly what they had learnt before* (37 - 40) *('Predicting' included in line 14)*

Evaluating pupils (evidence-based judgement on pupils' performance) *And they were good because they understood most of the things* (40)

Commenting: Elaborating (additional information provided to support '*they understood most of the things*') *And when I circled the plurals they understood what it was the point and why to use singular or plural, although when they filled in the gaps, then they sometimes forgot about it.* (41 – 43)

Commenting: Opinion (expressing opinion concerning pupils' 'creativity') *I think they were quite creative to change the things they had to buy or that they bought. And just one pair copied mine.....But they didn't copy it.....they changed it a little bit* (43 – 44)

- Activity 7: Choral repetition Cognitive skills

Describing/task *And we did with choral repetition* (47)

Commenting: Opinion (expressing view based on her general teaching belief)....*you know... I think pronunciation is important* (48)

Commenting: Elaborating (additional information provided on '*choral repetition*' and '*pronunciation*') *we can return back to this task again and we will a little bit improve their pronunciation* (48 – 49)

- Activity 8: The conversations Cognitive skills

Evaluating pupils (evidence-based judgement on pupils' performance) *because "expensive" and some expressions were not so good when they read out the conversations.... and they weren't so sure of the words....* (49 - 50)

Evaluating task through Problem Solving episode (50 – 64):

~ Identifying problem ....*it's always a problem when the number of the group is quite big, when we listen to each other they don't really want to* (61)

~ *Identifying cause....And originally I wanted to give them more tasks so to concentrate on when they listen to each other so I prepared a little sheet.....But I looked at my watch and I saw that we didn't have too much time.* (53)

~ Identifying solution *we will continue...and the ones who haven't read the conversation yet, when they will read it out, then the others will get these little sheet and they have to write down what are the things they will buy.....and the exact price of each one.....* (53 – 55)

~ Evaluation (of solution) *maybe in this way, the task it's easier to concentrate on each other's conversation.....But if they've got a worksheet then it's easier to make them* ***listen*** *to. And that is why I would like to do it in this way next time.* 59 – 64)

Commenting: Elaborating (additional information provided on *'postcard writing'* and *'we didn't have too much time'*) *But I didn't want to leave out the postcard writing. They met a postcard in their books so they saw the example and when we are going to write a test the postcard writing will be involved as well.....so we had to practise it again* (65 - 69)

- Activity 9: Model how to create own post cards Cognitive skills

Commenting: Opinion (expressing view based on teaching belief) *I think it's always very important to collect some ideas.* (69)

Pedagogic Reasoning: Simple (Single reason based on personal experience to explain decision to collect ideas) *Because....if I give an example and I leave it there.....they sometimes just copy mine....So that is why we collected other expressions to the gaps and then they can choose and they can find out their own version* (70 - 73)

- Activity 10: Drawing a postcard Cognitive skills

Describing/task *And then they drew a postcard.* (73)

Commenting: Opinion (expressing view based on general belief) *And drawing a picture of a place where they are, it's also good* (74)

Pedagogic Reasoning: Intermediate (Reasons to explain postcard drawing task drawn from pedagogy/meaningful context) *because maybe the whole task is more memorable in this way....Because I think, children like drawing at this age and if they got a picture in their minds then easier to remember the vocabulary and grammar because they remember 'Wow, yes' for example when they go to Hawaii, in their mind, in their dreams.....in my opinion, it is easier.* (75 - 80)

Evaluate the lesson (Int. *Did you think it was successful?*) Cognitive skills

Evaluating lesson through Problem Solving episode (90 - 103):

~ Identifying problem ....*at the beginning I would say yes. The part that I didn't like so much, it was the conversation when they listened to each other and they didn't really listen*

~ Identifying cause to problem *I prepared a little task and because of the time I missed it.*

~ Evaluation (of cause) *But in that way I think it would have been more successful*

~ Identifying solution *probably I would have left out the postcard now* (if observer had not been present).....*and maybe would have worked on this topic....a little bit more. And probably then there is another exercise in their workbook about the prices, so maybe I would have spent a bit more time on it because there is also the written form.... how to write down....So maybe a little more practice.... I would have involved.*

Discuss aims (Int. *What was your overall aim?*) Cognitive skills

Describing/aims *I wanted to develop their speaking and listening so a little bit skills development,....the other thing was to practise a little bit the vocabulary and all the situations that come out of a holiday* (108 – 111)

Commenting: Opinion (expressing view based on teaching belief) ...*so I mean the names of the souvenirs and the prices which is quite important to know when they go abroad.* (112 - 113)

Evaluating pupils (evidence-based judgement of pupils' performance) *And they were good because some of them were quite realistic when* ***they*** *tried to give a price to an object.* (113 - 114)

Commenting: Elaborating (additional information/observations and examples, provided on '*souvenirs*', '*prices*', '*price to an object*') *And it's always difficult them because the forint and the pound is totally different.....And sometimes they think that 'Wow! It's very cheap'. And that thing isn't so cheap....they are little children but it's also it's also important to feel what we mean cheap and expensive when we talk about pounds because the values are different and it's a good way to talk about the different cultures too because, you know Britain is a little bit richer and* ..... (114 - 120)

Explain reasons for actions (*Why did you...?*) Cognitive skills

Pedagogic Reasoning: Intermediate (multiple reasons provided drawing on linguistic and cognitive sources to explain why she did maths in English) *I wanted to (1) highlight also the meaning of "altogether" and I wanted them to (2) use the numbers and work with numbers in English as well and (3) think harder with the maths and English together....er.....I didn't really plan it in that way, because I didn't know what kind of price they would say. When they give for example two pounds then its quite obvious one pound....But it was one pound ninety-eight....and in this case I think it's quite a tricky because.....because maybe not all of them understood that it was two and not just one..... And so (4) a kind of comprehension of the text.* (125 – 138)

(b) TALKING ABOUT TEACHING

Describe teacher recall (Int. *How do you remember it?*) Reflection

I see it.....the lesson...I visualize the lesson just like a video...So I can see myself standing here and standing there. I can see the children reaction and I can see when they chatting about something else.....a video. (141 – 156)

Describe novice recall Reflection

I think it's because they always want to follow their lesson plans and they are a little bit nervous whether they leave out something or not and I think that is why they memorize the lesson plan.....very, very accurately and that is why the first thing they remember is the plan itself. (163 – 168)

(a) TALKING ABOUT THE LESSON

Discuss activities

Describing/important task Cognitive skills

.... asking them....asking the questions for the postcard because you know .....and 'What is your favourite and de..de..de..... (176 - 180)

Commenting: Opinion (expressing view based on teaching belief) Cognitive skills

...and although I know that maybe some children get a little bit more role when I ask questions that they are quicker and they answer a little bit more....but I think that the others can learn from it...and all the others try to do something and the pair work is very good for it. and.....er.....when they work individually on a postcard and everybody is involved. (180 – 185)

Describing/important task Cognitive skills

....it was also very important to teach them the prices and how to do a shopping....and how to write a postcard. So these things were my focus (185 - 187)

Discuss possible changes to lesson

Evaluating task through Problem Solving episode (190 - 195) Cognitive skills

~ Identifying cause to problem ...*yesterday I realised that I didn't have more big sheets at home*

~ Identifying problem ...*and that is why my card was a little bit smaller.*

~ Evaluation/comment (of problem's seriousness) *...But it caused a problem because .... when I collected the words...the lines were very close to each other and it was very difficult for the children to realise which line goes in which place*

~ Identifying solution *...so a bigger sheet was needed but I didn't have.*

(b) TALKING ABOUT TEACHING

Describe planning (Int. *How did you plan ..?)* Planning

"So first I checked the material in the book. And then I thought over what I wanted to do in this lesson. And then I collected some ideas for myself and then I put them together and then I tried to judge the time I would need for each of the tasks I wanted to do. (Int. *How do you decide what to include?*) *So first what I want them to learn. That is the first thing that I focus on and for this purposes I try to find the tasks and the activities and the exercises. I looked at the book and then I started to think about how can I start to join the previous lesson with this lesson. Then...the basic skill I would like to develop* (198 – 210)

Describe problem solving in-class Reflection

(Int. *What do you do if something doesn't work?*)

....if I see that they don't understand what the task is then I will use more ideas of course then I more time, then I try to explain them in another way what the task is. But when they are absolutely lost, then I change the language and I use the mother tongue as well.....So in the classroom so I realise something they don't understand and they are staring at me and they don't start the task I want them to start then I do this so....So when I feel even in the middle of the task that something is going wrong, then I stop and I give another action. Although it is sometimes quite difficult because they are so involved it is very difficult to get their attention. But when I realise in more places, then

I think it's useful.....because then they can change it and they can read it out and maybe fewer mistakes we will find. (212 – 231)

Describe problem solving post-class Reflection

After the lesson I think over the lesson again and I try to find out the...what was wrong and how I could've changed the things, maybe the instructions, the motivation and maybe how. If I think it was rubbish because was too difficult for them then how I could simplify the task or maybe the instructions and maybe how I could put the things into smaller bits. (234 – 238)

(a) TALKING ABOUT THE LESSON

Discuss pupils

Evaluating pupils through Problem Solving episode (243 – 258): Cognitive skills

~ Identifying problem ....*you know this is a difficult class. There are some pupils who are absolutely are not interested in studying English and among the 20 there are about 3 or 4 of them.*

~ Identifying a solution ....*I have tried different things and Gabi too. But the only thing that worked with them, is when they have to create something in groups. Then they are really interested in.*

~ Evaluation/Comment (on solution) *However if we do these kinds of things all the time then they don't learn the material they should by the end of the school year. And this is a very difficult thing because whenever we do something else or when they have to work individually, when they have to read or write they absolutely not interested in.*

~ Identifying cause to problem .....*these children are absolutely bad concerning other subjects as well. And I think English is a little bit over their head. Because*

there is a lot of children together and there are better ones. Very, very difficult to work with them because they always feel that the others are much better and lately because of the new policy I don't think I have so much time to prepare for them special tasks as I had before

(b) TALKING ABOUT TEACHING

Describe current teaching situation Context

...we have to write a lot of paper work. And that is why it takes so much time from my life and I know that I don't have so much time for my lessons as I used to have. And I feel absolutely sad and I'm not very happy about it. But 24 hours is just 24 hours and I can't make it 48 or something like that.....You know just write the curriculum and the lesson the "tanmenet" the local things the local documents.....and we have to write a lot of things reports and the school is involved in a lot of projects and we have to translate a lot of things. And when you do it until 3 o' clock in the morning then you won't have time to prepare for your lessons so enthusiastically than earlier. So I can say that this term and the last are the worst in my teacher's life in that way. And I fear that I don't have so much time for my lessons which in my opinion would be the most important things and not administration. (260 - 277)

Describe teacher learning Teacher Learning

(Int. *What helps you learn about teaching?)*

I try to attend different teacher trainings and meetings and sometimes you can pick up new ideas and when I talk to the children. Sometimes I feel that 'Mmmm maybe they enjoyed it"' and then when I feel that it's a good way to do it more often then I do it more often because if they enjoy something, probably they are more involved and learn

more from it, if it is a thing which is possible maybe doing it more regularly. (313 – 319)

Describe problems with teaching English Teacher Learning

the biggest problem....is always the number of the pupils. When there are nearly twenty then I think it's much more difficult to organise the things because then it is much more preparation and then I can't make all of them speak so much just when we do group work or pair work But ..correction is also a little bit more difficult in that way. So number of pupils is the most difficult for me. (292 – 297)

Describe self-image as a teacher Teacher Learning

(*How do you see yourself as a teacher?*)

...a gardener does a lot of things so lets the plant to grow but when they need help, then helps them and shapes them and forms them and our task is that as well....human relationships are also important for me as a teacher. So for example I don't like teaching pupils whom I don't know so I like to get to know them even their backgrounds because I think then it's much easier to work with them. And I always want them to think of me as a person who helps them, an older friend ...maybe a combination of this. (311 - 325)

(a) TALKING ABOUT THE LESSON

Discuss pupils Cognitive skills

Describing significant incident *When the girls started to chat and maybe not listen to the others* (328)

Commenting: Elaborating (additional information provided about *the girls*) *And there is a girl in a pair in front of the boys near you....I realised I will have to find out*

something for the girl....she came from Vocational Academy and they had 5 lessons per week (330 – 333)

Evaluating pupil through Problem Solving episode (333 – 345):

~ Identifying problem *that girl or her knowledge is absolutely higher than the others' knowledge (334)....And I see that sometimes she gets bored (348)*

~ Identifying a solution *So I am thinking of preparing extra material for her*

~ Identifying cause to problem *because all these things she's quite familiar with. And I see that sometimes she gets bored.*

~ Evaluation/Comment (on suggested solution) *But I think the things she likes when she can act out something and she can be on stage.....because I realise that is the thing she likes....so perhaps something like that is needed.*

(b) TALKING ABOUT TEACHING

Describe teacher learning Teacher Learning

(Int. *Where do you learn new ideas from?)*

Trainings as I mentioned and sometimes book as well because I have methodology books as well and I just look up information. (347 – 348)

Describe teacher learning Teacher Learning

(Int. *When you try a new idea, what do you do with it?*)

I try to think over...I try to adapt because I don't think everything works in that way that is written in the book. Because sometimes I feel that the theory and the practice are quite far from each other and I ***also*** *could write very nice things but in practice they are absolutely different.....I try to change it according to the class needs....And then I try it in the lesson when I have changed it a little bit and I compare the original one and my one. But I don't think I have ever tried anything just when just I read. Because I don't*

think it's the best idea - for me at least. Maybe for some people it works but for me I don't think so... (Int. *you have to match it to the context*) *Yes.....The pupils...time of day.....the school.....* (351 – 365)

Describe planning Planning

....when I teach it by myself the plan is in my head most of the time. But I never go in the classroom without preparing so at least I have checked the things I want to teach and I prepared the cassette and things I need. (369 – 372)

Describe post-lesson reflection Reflection

(*Do you...think a lot about it/lesson when you've finished?*)

.....when I feel that it's quite OK and most of the things went smoothly then, lately I don't think about it again.....But when I feel that something was not so good and something was not going so smoothly then when I am preparing for the next lesson then I think back to the previous one.....not after the lesson because after the lesson I don't have time because in my head is the following lesson so just when I prepare for the same class lesson at the following one. (375 – 382)

Appendix 5

Tally Charts 1 and 2

Tally Charts 1 and 2 record participants' use of cognitive skills when reflecting on lessons in post-lesson Interviews 1 and 2. The column "No. of occasions" indicates the number of occasions that participants used the five skills represented in the Tally charts when discussing lesson events.

Appendix 4a. contained the interview transcription of an experienced teacher's (Csilla) post- lesson Interview 1. Appendix 4b. contained an example of how that interview was coded with the cognitive skills Csilla used to discuss lesson events highlighted in the colour grey. Csilla's use of cognitive skills has been recorded in Tally Chart 1 as follows.

In post-lesson Interview 1, Csilla (C1) used the five skills represented in Tally Chart 1 on forty-nine occasions. "Describing" was used on ten occasions, "Pedagogic Reasoning" was used on ten occasions, "Commenting" was used on fifteen occasions, "Evaluating" on twelve occasions and "Predicating" on two occasions. Percentages were obtained by dividing the number in a skill category by the total number of occasions skills were used then multiplying by 100. Thus for Evaluating, $12 \div 49 \times 100 = 24.5\%$. This figure of 24.5% suggests that for Csilla, 24.5% of her contributions when reflecting on her lesson events involved evaluating lesson phenomena.

Tally Chart 1 (Post-lesson Interview 1)

		Descriptive	Analytical								
Participant	**No. of occasions**	**Describing**	**Pedagogic Reasoning**			**Commenting**		**Evaluating**			**Predicting**
Amélia (A1)	**36**	**16**	**3**			**6**		**8**			**3**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			3			3	3	1	4	3	
	100%	44.5%	8.3%			16.7%		22.2%			8.3%
Anikó (A2)	**41**	**17**	**13**			**5**		**6**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			12	1		3	2	1	4	1	
	100%	41.5%	31.7%			12.2%		14.6%			
Atilla (A3)	**31**	**14**	**7**			**5**		**4**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			5	2		3	2	3	1		
	100%	45.2%	22.6%			16.1%		12.9%			3.2%
Bettina (B1)	**43**	**22**	**10**			**8**		**3**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			10			1	7	1	2		
	100%	51.1%	23.3%			18.6%		7%			

Participant	No. of occasions	Describing	Pedagogic Reasoning			Commenting		Evaluating			Predicting
Boglárka (B2)	**23**	**10**	**5**			**5**		**2**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			5			1	4		2		
	100%	43.5%	21.7%			21.7%		8.7%			4.4%
Bella (B3)	**34**	**13**	**11**			**5**		**4**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			8	3		2	3	1	2	1	
	100%	38.2%	32.4%			14.7%		11.8%			2.9%
Csilla (C1)	**49**	**10**	**10**			**15**		**12**			**2**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			6	4		8	7		5	7	
	100%	20.4%	20.4%			30.6%		24.5%			4.1%
Csenge (C2)	**62**	**17**	**12**			**23**		**9**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			7	3	2	14	9		3	6	
	100%	27.4%	19.4%			37.1%		14.5%			1.6%
Cecília (C3)	**29**	**4**	**9**			**7**		**8**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			4	5		4	3		6	2	
	100%	13.8 %	31%			24.1%		27.6%			3.5%

Tally Chart 2 (Post-lesson Interview 2)

		Descriptive	Analytical								
Participant	**No. of occasions**	**Describing**	**Pedagogic Reasoning**			**Commenting**		**Evaluating**			**Predicting**
Amélia (A1)	**57**	**20**	**16**			**12**		**8**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			14	2		6	6		4	4	
	100%	35.1%	28%			21.1%		14%			1.8%
Anikó (A2)	**39**	**16**	**5**			**7**		**11**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			3	2		3	4	3	8		
	100%	41%	12.8%			18%		28.2%			
Atilla (A3)	**37**	**11**	**11**			**10**		**5**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			8	3		2	8	1	1	3	
	100%	29.7%	29.7%			27%		13.6%			
Bettina (B1)	**34**	**12**	**5**			**8**		**8**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			3	2		3	5	1	6	1	
	100%	35.3%	14.7%			23.5%		23.5%			3%

Boglárka (B2)	**50**	**13**	**10**			**12**		**14**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			9	1		3	9	1	9	4	
	100%	26%	20%			24%		28%			2%
Bella (B3)	**41**	**18**	**9**			**8**		**6**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			6	3		1	7	3	2	1	
	100%	43.9%	22%			19.5%		14.6%			
Csilla (C1)	**91**	**24**	**22**			**29**		**15**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			13	9		13	16	1	6	8	
	100%	26.4%	24.2%			31.8%		16.5%			1.1%
Csenge (C2)	**31**	**10**	**7**			**9**		**4**			**1**
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			5	2		3	6	1	2	1	
	100%	32.3%	22.6%			29%		12.9%			3.2%
Cecília (C3)	**32**	**7**	**7**			**10**		**8**			
			Simp.	Int.	Crit.	Opin.	Elab.	Self	Task/Le	Ps.	
			5	2		5	5	2	5	1	
	100%	21.9%	21.9%			31.2%		25%			

Appendix 6

Table illustrating Processes of Problem Solving

This table records the problem solving processes used by participants when solving teaching problems.

Each row represents one episode. The columns of identifying the problem, identifying its cause, identifying a solution and conducting an evaluation, represent the four problem solving processes contained within each episode. The numbers in the columns record when a participant completed a problem solving process within each episode.

The words *"Int."* indicate the problem was identified by the interviewer but the other processes in this particular episode were completed by the participant.

		Identify Problem	Identify Cause	Identify Solution	Evaluation
Beginners					
Amélia (A1)	Interview 1	1			1
		1			
		1		1	
	Interview 2	1		1	1
Anikó (A2)	Interview 1	1	1	1	
		1		1	1
		1		1	
		Int.	1	1	
Anikó (A2)	Interview 2	2	2	2	
		2			
		Int.		1	
Atilla (A3)	Interview 1	1	1	1	
		1		1	
		Int.	1		
	Interview 2	*Int.*	1	1	
Accomplished beginners					
Bettina (B1)	Interview 1	1			
	Interview 2				
Boglárka (B2)	Interview 1	3		3	3
	Interview 2	1		1	1
		1	1		
		2			
Bella (B3)	Interview 1	1	1		
		1			1
		1	1	1	
	Interview 2	1		1	
Experienced					
Csilla (C1)	Interview 1	5	5	5	5
	Interview 2	1	1	1	1
Csenge (C2)	Interview 1	3	3	3	3
		1		1	
	Interview 2				
Cecília (C3)	Interview 1	3	2	3	3
	Interview 2	1	1	1	1
		1		1	1

Appendix 7

Frequency of use of "Evaluating"

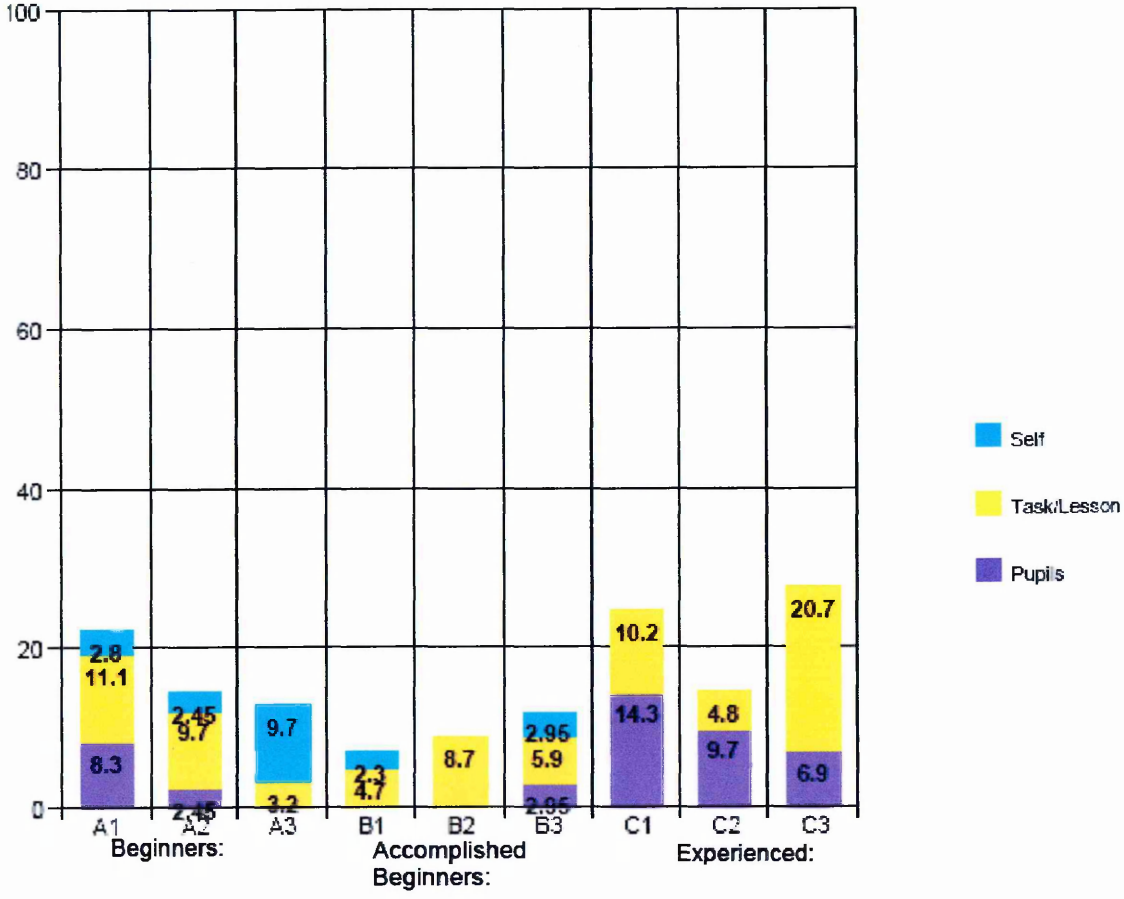
These two graphs represent how often participants used the skill of "Evaluating" as a proportion of their total skill use when reflecting on lessons in Interviews 1 and 2.

The horizontal axis represents the nine participants. The bars indicate as a percentage the proportion of total skill use that was devoted to "Evaluating". The colour blue represents self-evaluation, the colour yellow represents evaluating the success of the lesson or individual tasks within the lesson and the colour purple represents evaluating the pupils.

For example, when Boglárka (B2) in Interview 2, reflected on her lessons, 28% of her total skill use involved "Evaluating", of which 18% consisted of evaluating tasks/lesson (e.g. *I had more interesting lesson than this one. Last week I felt myself better*), 8% evaluating her pupils (e.g. *the first group couldn't do it properly.....because they couldn't understand the English I think...and I tried to avoid using Hungarian language.....and I think it would be better to say it in Hungarian to make the meaning clear*). 2% consisted of self evaluation (e.g.....*practise the word, the pictures.....and it was a weak point in my lesson because I took a lot of time to look at it).* Hence 28% of Boglárka's contributions involved evaluating lesson phenomena

Frequency of use of "Evaluating"

Interview 1



Interview 2